

COUNTY BOROUGH OF BIRKENHEAD.



ANNUAL REPORT
OF THE
MEDICAL OFFICER
FOR
1920.

D. MORLEY MATHIESON, M.A., M.D. (Edin.), Ch.B., D.P.H.,

Medical Officer of Health, and
Principal Medical Officer for the Municipal Tuberculosis, Mental Deficiency,
Maternity and Child Welfare, &c., Schemes, and for the School Medical Service.

COUNTY BOROUGH OF BIRKENHEAD.



ANNUAL REPORT
OF THE
MEDICAL OFFICER
FOR
1920.

D. MORLEY MATHIESON, M.A., M.D. (Edin.), Ch.B., D.P.H.,

Medical Officer of Health, and

Principal Medical Officer for the Municipal Tuberculosis, Mental Deficiency,
Maternity and Child Welfare, &c., Schemes, and for the School Medical Service.

INDEX.

	PAGE
Abattoirs	26
Ante-natal clinic	53, 59
Anthrax	43
Anti-influenza vaccine	44
Area	1
Babies' " At Home "	58
Births, notification of	4
Birth-rates	3
Canteen for mothers	54
Cerebro-spinal meningitis	42
Cleansing of persons	44, 66
Clinics: Ante-natal	53, 59
Post-natal	58
Dental	66
Eye	69
Minor ailments	69
Tuberculosis	33
Venereal diseases	37
Corkhill fund	30
Corporation tenement dwellings	50
Deaths	4
Death-rates	4
Deaths, uncertified	5
Density of population	3
Dental clinic	66
Dental treatment	32, 54
Diphtheria antitoxin	44
Disinfection after infectious diseases, etc.	35, 44
Drugs	24
Elementary schools (medical inspection)	67
Employment of children	64
Encephalitis lethargica	42
Eye clinic	69
Factories and workshops	51
Farm colony	31
Food inspection	26
Food and drugs, sale of	28
Food, unsound	28
Health of school children	63
Home nursing	45, 61
Hospital, infectious diseases	45
Hospital, Leasowe	35
Houses, new	47
Housing acts	48
Housing and general sanitation	47
Increase of Rent, etc., Act, 1920	50
Industries, local	22
Infantile mortality	6
Infectious diseases hospital	45
Infectious diseases (notifiable)	41
Infectious diseases (non-notifiable)	43
Influenza	43
Inquests	5
Inspection, visits of	49
Laboratory	35
Leasowe Hospital	35
Local industries	22
Lodging houses	50
Maternity and child welfare	53
Maternity bags	54
Maternity hospital provision	54
Medical inspection of school children	63

INDEX—CONTINUED

	PAGE
Mental deficiency	46, 75
Meteorological results	1
Midwives, inspection and supervision of	57
Milkhouses	24
Milk supply	24
Milk (Mothers and Children) Order, 1919	59
Minor ailments clinic	69
Notification of tuberculosis; efficiency of	33
Nurses, visits of	35, 46, 57
Nursing, home	45, 61
Occupations	22
Open-air school	66
Ophthalmia neonatorum	54
Poor law relief; amount of	23
Population	3
Property, uninhabited	47
Provision of maternity hospital	54
Rag flock	52
Rats and mice	50
Ringworm, treatment of	66
Sanatorium, Thingwall	30
School children, health of	63
Secondary schools; medical inspection	64, 72
Shops (Early Closing) Act, 1920	51
Shops	51
Slaughterhouses	26
Smallpox	42
Special school for mentally defective children	75
Surgical tuberculosis	31, 35
Theatres, music halls, etc.	50
Thingwall sanatorium	30
Tuberculosis	30
Tuberculosis clinic	33
Uncleanliness, treatment of	71
Unemployment	22
Vaccination	44
Venereal diseases	37
Voluntary agencies	61
Voluntary workers	58
Water supply	24
Workshops	52
X-Ray treatment of ringworm	66

CONTENTS.

	PAGE
Short statistical summary	v
Committees	vi
Preface	vii
Administration	viii
General administrative arrangements	viii
Staff	viii
Area, situation and weather	1
Area and situation	1
Meteorological results	1-2
Population, births and deaths	3
Population	3
Births	3-4
Deaths	5-21
Local industries	22
Occupations	22
Unemployment	22-23
Amount of poor law relief	23
Water supply, food and drugs	24
Water supply	24
Milk supply	24-26
Other foods	27
Sale of Food and Drugs Acts	28-29
Tuberculosis	30
Administrative arrangements	30-32
Prevalence of, and mortality from tuberculosis	32
Cases dealt with through the tuberculosis clinic	33-35
Home visiting, disinfection, etc.	35
Leasowe Hospital	35
Statistical tables	36
Venereal diseases	37
Administrative arrangements	37
Treatment carried out at the clinic	37
Treatment of Birkenhead patients carried out at other treatment centres	37
Issue of salvarsan substitutes	37
Bacteriological work	37
Propaganda	38
Statistical tables	39-40
Other infectious diseases	41
Infectious diseases which are notifiable	41-43
Non-notifiable infectious diseases	43
Vaccination	44
Disinfection	44
Issue of diphtheria antitoxin	44
Issue of anti-influenza vaccine	44
The infectious diseases hospital	45
Home nursing	45
Mental deficiency	46
Administrative arrangements	46
Cases dealt with under Mental Deficiency Act, 1913	46
Cases dealt with under the Elementary Education (Defective and Epileptic Children) Acts, 1899 and 1914	46
Housing and general sanitation	47
Staff	47
Number of dwelling houses, etc., in borough	47
New houses erected and insanitary houses demolished	47
Uninhabited property	47-48
Steps taken under Housing Acts	48
Other work in connection with housing and general sanitation	49-50
Inspection of lodging houses, etc.	50
Shops, factories and workshops	51
Shops Acts, 1912-1920	51
Factory and Workshop Acts, 1901 and 1907	51-52
Rag Flock Act, 1911	52

CONTENTS—CONTINUED.

	PAGE
Maternity and child welfare	53
Administrative arrangements	53-56
Inspection and supervision of midwives	57
Home visiting of expectant mothers, mothers, and young children	57-58
Post-natal clinics	58-59
Ante-natal clinic	59-61
Other provision made by the local authority	61
Agencies assisted by the local authority	61-62
Agencies not provided or assisted by the local authority	62
Health of school children	63
Administrative arrangements	63-67
Inspection (elementary schools)	67-68
Treatment (elementary schools)	68-72
Inspection and treatment (secondary schools)	72-75
Miscellaneous	75-77
Board of Education Tables 1 to 14	78-90

SHORT STATISTICAL SUMMARY.

1920.

Area of Borough	3,850 acres, or a little over 6 square miles
Estimated population (at midsummer)	152,345
Number of persons per acre (density of population)	39.3
Estimated number of houses in Borough	26,933
Number of inhabited houses at time of census, 1911	24,343
Rateable value	£761,930
Birth-rate per thousand of the population.....	27.7
Death-rate " "	13.3
Average death-rate for last ten years	14.9
Phthisis death-rate per thousand of the population	0.76
Infantile mortality rate (per 1,000 births)	102
Percentage of total deaths which were uncertified	0.76
Average number of children in elementary schools	24,852
Total children medically inspected during year	9,281

COMMITTEES.

The following was the constitution of the Health, Education, Mental Deficiency, and Maternity and Child Welfare Committees as on 31st December, 1920:—

Health Committee.—Mr. Alderman Mason, chairman; Mr. Councillor Tweedle, deputy-chairman; Alderman Byrne, Councillors Aspinall, Bishop, Miss Hickey, Hoblyn, Mrs. Hugh-Jones, Miss Laird, Mrs. Mercer and Speed.

Education Committee.—Mr. Alderman Arkle, chairman; Mr. Alderman Russell, deputy-chairman; Alderman Solly, Councillors Collin, Chalmers, Fletcher, Miss Hickey, G. J. Jackson, Lees, Maddocks, Major, Merritt, Nathan, Procter and White.

Non-Council Members: J. P. Eglen, Esq., Rev. Canon O'Toole, W. Garmon Jones, Esq., S. R. Williams, Esq., Mrs. Lily Le Mesurier, Miss Annie A. Laird, W. H. Jones, Esq., J. H. Gibson, Esq., and C. J. Blair, Esq.

Mental Deficiency Committee.—Dr. John Noble, chairman; Mr. Alderman Gamlin, deputy-chairman; Aldermen Arkle, Curphey and Goodwin, Councillors Godsell, Merritt and Speed.

Non-Council Members: Mrs. E. C. Gossage, Mrs. E. S. Oakshott, Mrs. Van Gruisen, Miss Annie A. Laird and Henry Byrne, Esq.

Maternity and Child Welfare Committee.—Miss Councillor Laird, chairman; Mrs. Councillor Hugh-Jones, deputy-chairman; Aldermen Arkle and Russell, Councillors Austin, Bishop, Boston, Dawson, Miss Hickey, Mrs. Mercer and Tweedle.

Non-Council Members: Mrs. S. J. Beattie, Mrs. A. C. Duckworth, Mrs. Pollard, Mrs. Spalding, Mrs. E. Corkhill, and Dr. F. Johnston.

The Mayor (Mr. Councillor Lees) ex-officio a member of all ordinary Committees.

The Annual Report was submitted to the above Committees in April, 1921.

PREFACE.

The following report deals with the year ending 31st December, 1920.

I am indebted to my colleagues in other departments ; to the Clerk to the Guardians ; to the Manager of the Birkenhead Employment Exchange ; and to the General Manager of the Mersey Docks and Harbour Board for certain information included in the body of the report. I am glad also to have this opportunity of expressing my appreciation of valuable assistance rendered by Mr. Dawson, chief inspector, and of the excellent work done by the staff during the past year.

D. M. M.

ADMINISTRATION.

General administrative arrangements.—The detailed arrangements made by the local authority for dealing with various branches of health work—*e.g.*, maternity and child welfare, tuberculosis, etc.—are set out in the appropriate sections of this report.

During the past year reorganisation of the general work of the department was carried out in certain directions. The duties of the nurses engaged on health visiting and clinic work were revised and co-ordinated on a district basis, with a view to removing duplication and securing greater efficiency. The work of the clerical staff of the department also was reviewed in detail and arranged on a different basis.

Staff.—The staff engaged on the work of the department consisted at the end of 1920 of the following:—

Medical Officer of Health and Principal Administrative Medical Officer:

D. MORLEY MATHIESON, M.A., M.D. (Edin.), D.P.H.

Assistant Medical Officers (whole time):

H. MASON LEETE, M.B., B.S., B.Hy., D.P.H. (Tuberculosis).

R. HASTINGS SMYTHE, L.R.C.P. and S. (I.), (School Medical Inspection).

MARY A. S. DEACON, M.B.E., M.B., B.S. (School Medical Inspection).

Assistant Medical Officers (part time):

CHARLES S. BREWER, O.B.E., L.R.C.P. & S. (Ed.), D.P.H. (Child Welfare).

WILLIAM R. DALZELL, M.A., M.B., C.M. (Venereal Diseases).

JOHN GRIMSHAW, M.D., B.S., D.P.H. (School Oculist).

Bacteriologist and Pathologist:

Professor J. M. BEATTIE, M.A., M.D., etc.

Analyst:

HERBERT E. DAVIES, M.A., B. Sc., F.I.C.

Inspectors:

WILLIAM DAWSON, Assoc. San. Inst. (Chief Inspector and Inspector under the Food and Drugs Acts).

JOHN M. CARNIE (Meat, Fish, and Slaughter House Inspector); ALFRED LONGSTAFF (Housing Inspector); JOHN LEE, H. T. TAYLOR, W. H. TILSTON, JOSEPH CROSHAW (District Sanitary Inspectors); S. G. RACKHAM (Workshops, Food and Drugs, etc., Inspector); ISAAC TAYLOR (Disinfecting Inspector); GEORGE WILLS (Shops Inspector); WILLIAM S. EDWARDS (Common Lodging Houses Inspector).

Matron, Fever Hospital:

Miss EMILY YEOMANS.

Health Nurses:

Miss M. GIBSON (Chief Health Nurse).

Mrs. L. E. FLETCHER (Health Nurse and Inspector of Midwives).

Miss BOYDELL, Miss BRINSON, Miss COTTLE, Miss COUCHE, Miss FLETCHER, Miss GRAHAM, Miss HOOD, Miss JONES, Miss LEWIS, Miss ROBINSON, Miss SMITH, Miss STEELE, Mrs. WILSON (Health Nurses).

Clerks:

JOSEPH BENNETT (Chief Clerk).

JOHN OWEN, ROLAND E. JONES, ERIC P. ROGERS, HAROLD BATY, THOMAS OVERSBY, CLIFFORD MARTIN, Miss E. FITZ-PATRICK, Miss R. M. GRIMES.

J. V. ROSCOE, J. CHALLINOR, N. WILSON, W. S. SHAW (School Medical Service).

General:

NURSING STAFF, FEVER HOSPITAL—21.

DOMESTIC STAFF, FEVER HOSPITAL—22.

MALE STAFF, FEVER HOSPITAL—4.

SANITARY LABOURERS, ETC.—9.

AREA, SITUATION, AND WEATHER.

Birkenhead occupies an area of 3,850 acres, or nearly six square miles, and is the largest borough in Cheshire. A note regarding the geographical situation and natural features of the Borough appeared in my annual report for 1919.

METEOROLOGICAL RESULTS.

The mean barometer reading for the whole year was 29.942 inches, as compared with a mean of 29.921 for the past 51 years.

The number of wet days in 1920 was 193.

The total amount of rainfall at Bidston was 33.343 inches, as compared with an average annual rainfall for the past 54 years of 28.528 inches.

The mean temperature for the year was 49.1° Fahrenheit.

In Tables A 1 and A 2 monthly and weekly results are set out; those in Table A 2 being for the 53 weeks ending December 31st, 1920.

TABLE A 1.

Meteorological observations during 1920. Monthly results.

1920	Mean Temperature	Mean Barometer	Rainfall—1 ft. above ground
	° F.	INCHES	INCHES
January	42.3	29.787	2.663
February	43.8	30.120	2.216
March	45.0	29.839	3.544
April.....	46.3	29.660	3.969
May	52.9	29.980	2.711
June	57.8	30.015	3.679
July	57.2	29.861	5.374
August	56.4	30.080	1.633
September ..	55.5	30.042	2.582
October.....	51.1	29.946	2.070
November.....	45.8	30.011	0.646
December	40.5	29.962	2.256

TABLE A 2.
 Meteorological observations during 1920. Weekly results.

Weeks.	Barometer means reduced to sea level & to 32°F.	Means of Evaporation.	Thermometer means.	Rainfall.		Average percentage of cloud to clear sky.	Mean hourly horizontal motion of air in miles	Percent of time wind blew from S., S.W. W. & N.W.
				Hours.	Inches.			
1	29.427	38.38	40.51	17.1	0.952	79.1	18.1	58.33
2	29.807	37.37	39.41	18.0	0.603	77.1	20.5	48.80
3	29.817	44.38	46.68	13.1	0.590	67.1	27.5	91.66
4	29.974	41.28	43.71	14.0	0.458	75.7	22.5	90.47
5	29.634	39.47	41.77	28.2	1.012	70.0	22.8	69.64
6	30.359	40.18	42.97	5.0	0.215	58.5	23.0	65.47
7	29.949	43.32	45.31	21.9	0.564	82.8	27.8	95.23
8	29.938	40.92	43.84	20.8	1.278	51.4	13.8	29.16
9	30.222	40.45	42.58	7.4	0.159	75.7	13.2	73.80
10	30.014	43.34	46.55	14.8	0.674	64.2	13.2	85.71
11	29.994	37.52	40.30	12.4	0.221	70.0	18.8	80.35
12	29.748	41.91	45.01	12.7	0.285	62.8	25.3	86.90
13	29.856	43.57	46.31	27.6	1.377	64.2	11.9	66.07
1st Qr.	29.903	40.93	43.45	213.0	8.388	69.1	19.8	72.43
14	29.525	44.80	47.04	28.2	1.414	95.7	12.4	41.07
15	29.732	42.47	44.50	29.9	1.137	100.0	10.9	51.78
16	29.289	45.67	48.41	26.5	0.768	87.1	17.8	48.27
17	29.863	45.07	47.84	31.4	0.836	78.5	16.3	68.50
18	29.794	42.65	45.77	34.5	0.960	54.2	24.9	86.80
19	29.963	45.25	48.98	19.3	0.507	61.4	24.5	92.85
20	30.083	47.78	52.44	7.7	0.245	60.0	16.8	62.50
21	29.894	47.48	51.45	23.7	0.715	75.7	17.5	76.19
22	29.999	54.74	58.94	20.2	0.977	60.0	8.0	58.33
23	30.195	49.77	53.82	5.7	0.160	68.5	19.1	77.38
24	29.953	51.34	56.61	14.1	1.319	45.7	14.1	3.57
25	29.925	57.01	62.14	16.0	1.563	64.2	10.5	16.07
26	30.108	53.51	57.47	0.0	0.000	74.2	12.5	94.64
2nd Qr.	29.871	48.27	51.95	257.2	10.601	71.1	15.7	59.80
27	29.768	54.67	58.18	33.6	1.653	90.0	14.6	67.85
28	29.801	52.32	55.85	23.9	0.932	84.2	13.6	52.38
29	29.898	54.61	58.12	20.8	0.798	82.8	14.6	85.11
30	29.922	54.52	57.81	22.7	1.210	80.0	15.3	98.80
31	29.883	53.61	56.90	20.3	1.526	78.5	16.1	80.95
32	29.765	52.44	56.57	22.5	0.693	75.7	18.2	93.45
33	30.165	54.52	57.41	6.3	0.310	64.2	11.0	83.92
34	30.069	51.71	55.10	8.4	0.360	81.4	15.9	83.92
35	30.239	54.51	57.28	7.0	0.213	64.2	10.3	85.71
36	30.148	52.28	54.74	20.3	0.620	60.0	12.0	60.71
37	30.096	54.04	56.88	6.6	0.179	84.2	15.3	94.76
38	29.789	52.47	55.70	24.6	0.928	68.5	10.2	79.76
39	30.097	49.38	52.68	3.4	0.144	47.1	9.8	46.42
3rd Qr.	29.972	53.11	56.40	220.4	9.566	73.9	13.6	77.98
40	29.897	52.55	55.52	10.7	1.113	57.1	11.7	47.61
41	29.759	55.11	57.51	10.8	1.315	72.8	13.3	20.83
42	29.989	51.34	54.08	5.5	0.231	65.7	12.4	0.00
43	30.911	45.74	48.37	0.0	0.000	70.0	13.7	4.16
44	30.172	43.42	45.40	0.0	0.000	45.7	13.0	0.59
45	29.804	41.72	44.34	6.5	0.274	68.5	13.0	17.85
46	30.159	47.42	50.38	1.4	0.127	78.5	13.3	98.21
47	29.983	44.48	47.67	4.9	0.110	52.8	25.7	56.54
48	30.793	40.00	41.25	2.5	0.098	65.7	16.9	000.0
49	29.883	43.38	45.68	13.2	0.346	75.0	22.1	59.52
50	30.295	36.60	37.91	7.0	0.138	61.4	7.1	11.90
51	30.315	30.98	32.18	2.7	0.200	85.7	6.4	0.00
52	29.603	40.34	41.72	12.3	0.883	74.2	15.2	48.80
53	29.621	46.20	48.11	23.6	1.453	70.0	15.5	54.70
4th Qr.	30.845	44.23	46.43	101.1	6.288	67.3	14.2	23.62
Year ...	30.147	46.63	49.55	791.7	34.843	70.3	15.8	58.45

POPULATION, BIRTHS, AND DEATHS.

POPULATION.

A full statement showing the growth of the population from 1801 onwards was given in my annual report for 1919.

Population, 1911.—The population of the Borough at the time of the 1911 census was 130,794.

Population, 1920.—(a) The Registrar-General's estimate of the population of the Borough for the year 1920 is 153,951.

(b) The estimated population, calculated on the census population of 1901 and 1911, is 152,345.

(c) The general birth-rate and death-rate for 1920 have been worked out on the basis of both the above estimates and are shewn below. All special death-rates (for example, the phthisis death-rate) have been calculated on the basis of the second of the above estimates.

Density of population.—The density of the population of Birkenhead at the time of the last census (1911) was 33.9 per acre. In 1920 the density had risen to 39.3 per acre.

The corresponding ratio of density for the 75 county-boroughs of England and Wales at the time of the last census was 21.0 persons per acre.

BIRTHS.

Births registered during 1920, and birth-rate.—During the year 4,222 births belonging to the Borough were registered. (This total includes 21 Birkenhead births registered in other areas and transferred to Birkenhead, and excludes 115 births belonging to other areas which occurred in Birkenhead and were transferred to the areas concerned. Among the latter are a large number of births which occurred at the Birkenhead Maternity Hospital and the Birkenhead Union Infirmary.)

This corresponds to a birth-rate of 27.4 per 1,000 of the population (taking the Registrar-General's population estimate) or 27.7 per 1,000 of the population (taking the second population estimate given above).

Birth-rate in recent years.—The birth-rates since 1911 are as follows:—

1911	28.4 per 1,000
1912	28.2 "
1913	28.7 "
1914	27.3 "
1915	27.4 "
1916	26.9 "
1917	22.4 "
1918	21.1 "
1919	22.5 "
1920	27.7 "

Comparison of birth-rate with rates for country generally.—

	Per 1,000 of population.
England and Wales	25.4
96 Great Towns (including London)	26.2
148 Smaller Towns	24.9
London	26.5
Birkenhead	27.7

Sex-distribution of births.—Of the 4,222 births, 2,147 were males and 2,075 females; a proportion of 1,029; 1,000.

Legitimacy.—Out of the 4,222 births registered, 159 were illegitimate; a percentage of 3.8.

Births notified during 1920.—During the year 4,193 births were notified in the Borough under the Notification of Births Acts, 1907 and 1915. Of these, 119 were still-births, leaving a total of 4,074 live births. This total includes births which occurred in the Birkenhead Maternity Hospital and the Birkenhead Union Infirmary, many of which were transferable to other areas.

The following is an analysis of the above births:—

Births in Public Institutions:—

Maternity Hospital	428	(24 still-births)
Union Infirmary	99	(7 „)
Other births (including those in nursing homes):—		
Notified by doctors only	344	(11 „)
Births attended by midwives, or midwives and doctors	3322	(77 „)
	4193	(119 „)

Un-notified births.—The Registrars reported 120 cases of un-notified births. 56 of these were attended by medical practitioners, 56 by certified midwives and doctors, 7 by the Maternity Hospital staff, and 1 by the Borough Hospital staff.

DEATHS.

Death-rate.—2,034 deaths occurred during the year; the total figure includes 106 deaths of Birkenhead residents which occurred outside the Borough, but excludes 139 deaths of non-residents which occurred in the area.

This gives a death-rate of 13.2 (calculated on the Registrar-General's estimate of the population) or 13.3 (calculated on the basis of the second estimate of population given above).

Deaths in recent years.—The death-rates since 1911 are as follows:—

1911	16.0 per 1,000
1912	14.7 ,,
1913	14.9 ,,
1914	15.6 ,,
1915	15.6 ,,
1916	14.2 ,,
1917	13.3 ,,
1918	17.6 ,,
1919	13.7 ,,
1920	13.3 ,,

Influenza and its complications were the main contributing factors in the high death-rate of 1918.

Seasonal deaths.—The following gives the deaths for each quarter of the years 1919 and 1920:—

	No. of deaths	
	1919	1920
First quarter.....	836	631
Second quarter.....	426	478
Third quarter.....	334	401
Fourth quarter.....	471	524
Totals	2067	2034

Sex-distribution of deaths.—Of the total deaths 1,092 were males and 942 females, a proportion of 1,159: 1,000.

Coroners' inquests.—Coroners' inquests were held regarding 144 deaths—that is, in 7 per cent. of the total deaths during the year. There were no deaths due to overlaying during the year.

Uncertified deaths.—Not all the death causes which are classified represent diseases or symptoms observed and certified by medical men in attendance during the last illness, or verdicts following official investigation. A significant proportion of the death causes are entered in the register on the doubtful testimony of deceased persons' relatives, or friends, or fellow-lodgers. The registrars have, therefore, been required to mark in the returns furnished every death not certified by a registered practitioner or made the subject of a coroner's inquest. In 1920, out of the 2,034 deaths registered, 11 were marked "not certified, that is, 0.54 per cent. The causes of the 11 deaths were entered in accordance with the statements of persons giving information to the registrars, viz.:—

Premature birth	4
Senile decay	2
Heart failure	2
Pneumonia	1
Bronchitis	1
Glycosuria	1

Naval and military deaths.—The deaths of 2 soldiers were registered in the Borough during the year 1920; 1 occurring in the Union Infirmary.

Causes of death.—From the beginning of 1920 the classification of causes of death hitherto employed was abandoned, and the recognised classification contained in the detailed international list was adopted. An analysis on this basis will be found in Tables P 1, P 2, and P 3.

Table P 1 (pages 8 to 17) shows the causes of death in detail, sub-classified according to age.

Table P 2 (page 18) is a condensed form of Table P 1.

Table P 3 (page 19) is similar to Table P 2 but shows a sub-classification according to districts instead of ages.

Infantile mortality.—There were 430 deaths of infants under 1 year old. This corresponds to an infantile mortality rate of 102 per 1,000 births.

There were 32 deaths in illegitimate infants under 1 year old; giving an illegitimate infant mortality rate of 201 per 1,000. Thus the chances of the illegitimate child dying within the first year of life were nearly twice those of the legitimate child.

The infantile mortality rates in recent years are shewn below:—

1911	136
1912	98
1913	117
1914	122
1915	122
1916	105
1917	95
1918	110
1919	102
1920	102

The causes of infant deaths, and the ages at which death occurred, are shown in Table P 1 (page 20).

Deaths from tuberculosis.—Tuberculosis was responsible for 8 per cent. of all the deaths recorded in the Borough in 1920. The deaths from the disease were as follows:—

Deaths from tuberculosis of the lungs	116
Deaths from other forms of tuberculosis	56
Total	172

This gives a tuberculosis death-rate of 1.13 per 1,000 of the population.

Of the 116 deaths from pulmonary tuberculosis during 1920, 104 occurred in individuals between 15 and 65 years old—that is, of a wage earning age.

This subject is further dealt with in the “ Tuberculosis ” section of this report.

Deaths from epidemic diseases.—The seven “ principal epidemic diseases ” caused 158 deaths, as follows:—

Diarrhœa and enteritis (under 2 years)	64
Whooping Cough	45
Measles	28
Scarlet Fever	4
Diphtheria (including membranous croup).....	15
“Fever” (enteric, typhus, and simple continued fever)	2
Smallpox	0

This corresponds to a death-rate from all these diseases of 1.04 per 1,000 of the population.

Deaths from other notifiable infectious diseases.—Pneumonia caused, in its various forms, 231 deaths; puerperal fever caused 8; erysipelas, 5; cerebro-spinal fever, 4; acute encephalitis lethargica, 3; malaria, 1.

Deaths from certain non-notifiable infectious diseases.—Syphilis was returned as the cause of 4 deaths, and 1 death was due to varicella.

Comparison of Birkenhead death-rates with those for country generally.—In Table P 5 (page 21) Birkenhead rates are shewn together with those for the country generally. The latter are provisional figures kindly supplied to me by the Registrar-General. Non-civilians are included in the figures for England and Wales, but not for other areas.

[illegible]

TABLE P 2.

Deaths: Causes and ages.

Causes of death	Net deaths at the subjoined ages of residents, whether occurring within or without the district.								
	All ages	Under 1 year	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards
All causes { Certified	2023	426	83	80	97	105	237	480	515
{ Uncertified	11	4	...	...	1	...	1	...	5
Enteric fever	2	...	...	...	1	...	1	...	..
Smallpox .....	...	...	...	...	...	...	...	...	...
Measles	28	8	5	12	3	...	...	...	...
Scarlet fever	4	...	1	...	2	...	1	..	...
Whooping cough	45	21	12	10	2	...	...	...	...
Diphtheria and croup	15	3	3	5	3	1	...	...	...
Influenza	37	1	...	2	2	5	6	9	12
Erysipelas	5	1	...	...	...	...	1	1	2
Phthisis (pulmonary tuberculosis)	116	...	...	1	11	31	43	30	...
Tuberculous meningitis	35	6	8	7	7	5	2	...	...
Other tuberculous diseases	21	2	...	3	5	5	5	1	...
Cancer (malignant disease)	181	...	...	...	2	1	21	100	57
Rheumatic fever	12	1	...	...	4	2	...	3	2
Meningitis	14	...	1	3	6	2	...	2	...
Organic heart disease	126	...	...	...	9	8	11	52	46
Bronchitis	244	49	10	8	2	...	7	59	109
Pneumonia (all forms)	231	75	21	12	10	7	36	46	24
Other diseases of respiratory organs	33	3	1	4	2	1	7	9	6
Diarrhoea and enteritis (under 2 years) ...	64	55	9	...	...	...	...	...	..
Appendicitis and typhlitis	12	...	...	...	3	5	1	2	1
Cirrhosis of liver	7	...	...	...	...	...	...	5	2
Alcoholism	3	...	...	...	...	...	2	1	...
Nephritis and Bright's disease	37	1	...	...	1	2	8	16	9
Puerperal fever	8	..	...	...	...	1	7	...	...
Other accidents and diseases of pregnancy and parturition	15	...	...	...	...	1	14	...	...
Congenital debility and malformation, including premature birth	144	143	...	1	...	...	...	...	...
Violent deaths, excluding suicide	64	3	3	6	8	11	13	13	7
Suicides	12	...	...	...	...	2	4	6	...
Other defined diseases ...	512	57	8	6	15	15	46	124	241
Diseases ill-defined or unknown	7	1	1	...	..	...	2	1	2
Totals	2034	430	83	80	98	105	238	480	520

TABLE P 3.

Deaths: Causes and districts.

Causes of death	Deaths in or belonging to localities at all ages						Total deaths in Public Institutions in the district
	Whole Borough	Birkenhead*	Tranmere*	Claughton Ward	Oxton Ward	Bebington Ward	
All causes { Certified	2023	1248	603	95	43	34	649
{ Uncertified	11	8	3	...	...	...	...
Enteric fever ..	2	1	...	1	...	...	...
Smallpox .....	...	...	...	...	...	...	...
Measles	28	20	8	...	...	...	...
Scarlet fever.....	4	2	2	...	...	...	2
Whooping cough	45	37	7	...	...	1	1
Diphtheria and croup.....	15	9	5	...	...	1	7
Influenza	37	15	19	...	...	3	3
Erysipelas.....	5	3	2	...	...	...	3
Phthisis (pulmonary tuberculosis)	116	75	31	5	2	3	47
Tuberculous meningitis	35	20	12	2	1	...	13
Other tuberculous diseases.....	21	10	9	2	...	...	9
Cancer (malignant disease)	181	99	53	17	8	4	61
Rheumatic fever	12	9	1	1	...	1	7
Meningitis ..	14	9	5	...	...	...	7
Organic heart disease	126	64	55	2	3	2	29
Bronchitis	244	159	70	8	5	2	82
Pneumonia (all forms)	231	160	55	9	5	2	66
Other diseases of respiratory organs.....	33	20	10	1	1	1	16
Diarrhoea and enteritis (under 2 years) ..	64	48	13	2	1	...	21
Appendicitis and typhlitis	12	4	4	..	3	1	8
Cirrhosis of liver ..	7	6	1	...	...	...	4
Alcoholism	3	3	...	...	...	...	4
Nephritis and Bright's disease	37	22	12	3	...	...	11
Puerperal fever	8	2	6	...	...	...	4
Other accidents and diseases of pregnancy and parturition	15	6	6	3	...	...	7
Congenital debility and malformation, including premature birth	144	109	29	5	1	...	18
Violent deaths, excluding suicide	64	38	19	3	1	3	36
Suicides.....	12	6	6	...	...	..	1
Other defined diseases	512	295	164	31	12	10	182
Diseases ill-defined or unknown	7	5	2	...	...	...	...
Totals ..	2034	1256	606	95	43	34	649

*" Birkenhead " district comprises Argyle, Grange and Cleveland wards. "Tranmere " district comprises Clifton, Egerton and Mersey wards.

NOTE.—All deaths which occurred in institutions are classified in the district in which the patient resided.

TABLE P 4.

Infant deaths, 1920: Causes and ages.

Causes of death		Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 4 weeks	Over 4 weeks & under 3 months	3-6 months	6-9 months	9-12 months	Total under 1 year
All causes	Certified	84	19	16	16	135	107	57	74	53	426
	Uncertified	4	...	...	...	4	...	...	...	...	4
Smallpox ..		...	...	...	...	...	...	...	...	...	...
Chickenpox ..		...	...	1	...	1	...	...	...	...	1
Measles .....		...	...	...	...	...	1	1	2	4	8
Scarlet fever ..		...	...	...	...	...	...	...	...	...	...
Whooping cough.....		...	...	...	...	...	1	4	8	8	21
Diphtheria and croup.....		...	...	...	...	...	...	...	1	2	3
Erysipelas .....		...	...	...	...	...	1	...	...	...	1
Tuberculous meningitis .....		...	...	...	...	...	...	2	3	1	6
Abdominal tuberculosis .....		...	...	...	...	...	...	...	...	...	...
Other tuberculous diseases.....		...	...	...	...	...	1	...	1	...	2
Meningitis (not tuberculous).....		...	...	...	...	...	...	...	...	...	...
Convulsions		4	1	...	...	5	2	1	2	2	12
Laryngitis .....		...	...	...	...	...	...	1	...	2	3
Bronchitis .....		...	2	1	2	5	21	9	11	3	49
Pneumonia (all forms) .....		...	2	...	3	5	14	11	25	20	75
Diarrhoea .....		...	...	1	...	1	8	5	4	1	19
Enteritis		2	...	1	2	5	15	8	6	2	36
Gastritis .....		...	...	1	1	2	...	1	2	...	5
Syphilis .....		...	...	...	...	...	2	1	...	...	3
Rickets ..		...	...	...	...	...	...	...	...	...	...
Suffocation (overlying) .....		...	...	...	...	...	...	...	...	...	...
Injury at birth		2	...	...	...	2	...	...	...	...	2
Atelectasis		13	1	...	...	14	2	1	1	...	18
Congenital malformations.....		6	3	2	...	11	2	...	1	1	15
Premature birth		44	3	3	2	52	6	...	...	...	58
Atrophy, debility and marasmus		14	6	5	4	29	27	8	4	2	70
Other causes.....		3	1	1	2	7	4	4	3	5	23
Totals..		88	19	16	16	139	107	57	74	53	430

Net births in the year—

Legitimate

4063

Illegitimate

159

Net deaths in the year—

Legitimate infants

398

Illegitimate infants ...

32

TABLE P 5.

Death-rates: Comparison with rest of country.

	Annual death rate per 1000 civilian population									Rate per 1000 births	
	All causes	Enteric fever	Smallpox	Measles	Scarlet fever	Whooping cough	Diphtheria	Influenza	Violence	Diarrhoea and enteritis (under 2 years)	Total deaths under 1 year
England and Wales	12.4	0.01	0.00	0.19	0.04	0.11	0.15	0.28	0.48	8.3	80
96 great Towns, including London (census population exceeding 50,000).	12.5	0.01	0.00	0.22	0.04	0.14	0.16	0.31	0.43	10.4	85
148 smaller Towns (census population 20,000 to 50,000).	11.3	0.02	0.00	0.19	0.03	0.10	0.14	0.27	0.38	7.8	80
London	12.4	0.01	0.00	0.22	0.05	0.17	0.22	0.30	0.47	9.5	75
Birkenhead.....	13.3	0.01	0.00	0.18	0.02	0.30	0.10	0.24	0.42	15.16	102

LOCAL INDUSTRIES.

OCCUPATIONS.

The staple industries of the district are shipbuilding, ship-repairing and engineering. A considerable section of the population is also employed in connection with flour milling, and with the importation and landing of cattle for slaughter and distribution, and large numbers of girls resident in Birkenhead are employed in the soap works at Port Sunlight, in the neighbouring district of Lower Bebington.

The occupations of males resident in Birkenhead at the time of the 1911 census were as follows (taking only groups containing over 1,000):—

Ships and boats	5,052
Dock labourers, wharf labourers, coalheavers, coal porters, coal labourers	2,305
On seas, rivers, and canals.....	2,192
General engineering and machine making	3,729
On railways	2,123
On roads	1,828
Building and works of construction	3,177
General labourers, factory labourers (undefined)...	1,451
Food, tobacco, drink, and lodging	3,216
General and local government	1,043
Professional occupations and the subordinate services	1,206
Commercial or business clerks	2,102
Merchants, agents, accountants, banking, etc., insurance	1,546
Messengers, porters, watchmen (not railway or government)	1,190

UNEMPLOYMENT.

The Ministry of Health request medical officers to give in their annual reports an indication of the extent of unemployment and of the amount of poor law relief in their areas.

The industries chiefly affected as regards unemployment during 1920 were shipbuilding, ship-repairing, and, in a minor degree, engineering.

For the first four months of the year there was a decrease in unemployment of quite material proportions, but from the beginning of May till October there was a gradual but steadily progressing increase.

During the next two months (October and November) there was a decrease, occasioned by temporary or casual jobs being obtained by workmen on ship repair work of short duration.

The last month of the year showed a very significant increase of unemployment; this may be attributed in part to the strike of ship joiners.

With the exception of the second, third and twelfth months of the year, the number of local placings by the Employment Exchange was not high.

During the September to November period considerable success attended the efforts of the Exchange in placing men in occupations in other districts. The majority of the men so placed were rivetters and holders-up, who were found employment at their trades, chiefly on the North-east coast and at Barrow-in-Furness.

TABLE O 1.
Unemployment during 1920.

Month ending	Live register	Increase or decrease in live register	Applicants placed	
			Locally	In other districts
4 weeks ending 6th February.....	1249	Dec. 252	82	5
4 " 5th March	1066	Dec. 183	134	2
5 " 9th April	868	Dec. 198	113	1
4 " 7th May.....	675	Dec. 193	67	3
4 " 4th June.....	914	Inc. 239	73	1
5 " 9th July	1683	Inc. 769	86	12
4 " 6th August	2197	Inc. 514	48	28
4 " 3rd September	3183	Inc. 936	30	38
5 " 8th October	4195	Inc. 1012	32	140
4 " 12th November	3786	Dec. 409	41	57
4 " 10th December	3626	Dec. 160	23	8
5 " 7th January, 1921 ..	5788	Inc. 2162	131	4

AMOUNT OF POOR LAW RELIEF.

The following is a statement of the sums expended in the relief of the poor in the Birkenhead Union for the year ended 30th September, 1920:—

Union Institution	£15,359	13	0½
Union Infirmary	17,537	1	8½
Children's Homes	4,633	6	11¾
Outdoor relief (actual cash payments to recipients of)	16,404	13	1
Lunatics in asylums and licensed houses (total cost of maintenance)	25,082	17	11
	£79,017	12	8½

The Birkenhead Union area covers the County Boroughs of Birkenhead and Wallasey, and the parishes of Bidston-cum-Ford and Noctorum. The populations of these three component parts were, in 1911:—

Birkenhead	130,794	(62.1 per cent)
Wallasey	78,504	(37.3 per cent)
Bidston and Noctorum	1,172	(0.6 per cent.)

WATER SUPPLY, FOOD, AND DRUGS.

WATER SUPPLY.

The present water supply of the Borough is constant and is obtained from deep wells in the new red sandstone.

Work on a scheme to provide a new water supply is now far advanced and will be completed during 1921.

MILK SUPPLY.

Source.—Milk is supplied to the Borough chiefly from farms in Cheshire, Shropshire, Denbighshire and Flintshire.

Milkhouses, etc.—The total number of milk shops in the Borough is 175. There are in addition 15 purveyors of milk, 5 cowsheds, and 45 farmers resident outside Birkenhead registered to purvey milk inside the Borough.

Milk shops are regularly inspected and the register of milk sellers is revised week by week.

During the year 364 notices to whitewash and efficiently to cleanse milkhouses, cowsheds, and dairies were served on occupiers of such premises, and complied with.

Quality of milk.—The composition of the various samples of milk taken in the Borough and analysed during the year 1920 is set out in Table F 1 (page 26), and gives an indication of the general quality of the milk supply.

Preservatives in milk and cream.—Samples taken under the Public Health (Milk and Cream) Regulations, 1912 and 1917, during the year showed the following results:—

1. *Milk, and cream not sold as preserved cream.*

Article	No. of samples examined for the presence of a preservative (a)	No. in which a preservative was reported to be present, and percentage of preservative found in each sample (b)
Milk	113	Nil
Cream	4	3 { 0.27% 0.27% 0.10%

Nature of preservative in each case in column (b).....

Action taken under the Regulations in regard to it

Boric acid.

In the first two cases the Vendors were cautioned, in the third case the Vendor was summoned and fined 30/-

2. *Cream sold as preserved cream.*

(a) Instances in which samples have been submitted for analysis to ascertain if the statements on the label as to preservatives were correct.

(1) Correct statements made	2
(2) Statements incorrect	—
Total	2

(3) Percentage of preservative found in each sample.	Percentage stated on statutory label.
0.22	0.4
0.34	0.4

(b) Determinations made of milk fat in cream sold as preserved cream.

(1) Above 35%	2
(2) Below 35%	—
Total	2

(c) Instances where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Article V (1) and the proviso in Article V (2) of the regulations have not been observed.
Nil.

(d) Particulars of each case in which the regulations have not been complied with, and action taken.
Nil.

3. *Thickening substances.*

The Public Analyst has not found any evidence of the addition of any thickening substances to the samples of cream or preserved cream which have been analysed.

TABLE F 1.

Composition of milk samples taken during 1920.

Date of sample	Identification No. given in quarterly report	Percentage of fat	Percentage of solids not fat	Date of sample	Identification No. given in quarterly report	Percentage of fat	Percentage of solids not fat	Date of sample	Identification No. given in quarterly report	Percentage of fat	Percentage of solids not fat
Jan. 14	3	4.15	8.52	Apl. 21	80	3.15	8.57	Sept. 8	171	3.60	9.20
	4	3.45	9.19		81	3.19	7.82		172	3.79	9.11
	5	4.12	9.10		82	3.90	8.50		173	4.38	8.48
	6	3.63	9.14		83	4.00	8.76		174	3.51	8.81
	7	3.90	9.05		84	3.49	8.07		175	4.05	8.82
	8	4.00	8.95		85	2.73	8.76		176	3.98	7.65
19	9	3.80	8.82	26	86	2.76	8.53	29	189	3.65	8.87
	14	7.40	8.35	27	87	2.85	8.75		190	5.12	8.80
30	20	3.39	8.02		88	3.10	8.88		191	4.05	8.80
	21	4.25	8.70		89	4.05	8.55		192	4.37	8.83
	22	3.47	8.59		90	3.52	8.80		193	3.10	8.93
	23	3.40	8.67		91	3.10	8.50		194	3.23	9.04
	24	3.80	8.93		92	3.22	8.65	Oct. 20	213	4.00	8.99
	25	4.90	8.67	28	93	3.27	8.73		214	3.32	9.75
Feb. 4	26	3.15	8.16		94	3.30	8.70		215	4.07	8.85
9	27	3.17	8.29		95	3.23	8.24		216	3.67	9.33
	28	2.85	8.16	June 9	114	3.62	8.66		217	4.00	8.85
18	29	3.50	8.82		115	2.49	8.99		218	4.19	9.60
	30	3.19	8.58		116	2.28	8.91	Nov. 2	226	4.20	8.58
	31	8.20	8.50		117	3.18	8.77	3	239	4.97	8.86
	32	3.90	8.54		118	4.20	9.42	10	248	4.19	8.99
	33	3.10	8.80		119	3.38	8.99		249	4.23	8.79
	34	4.18	9.44	15	120	2.52	8.78	15	255	3.35	8.97
Mar. 24	58	3.37	9.08		121	2.97	8.78		257	3.62	8.86
	59	4.30	8.83		122	3.00	8.58	16	259	3.90	8.92
	60	3.41	8.33	July 28	129	3.28	8.95		265	2.95	8.95
	61	2.73	8.89		130	3.23	9.00		269	3.80	9.12
	62	2.31	8.47	Aug. 11	138	3.83	8.40	17	275	3.96	9.09
29	64	2.73	8.87		139	3.97	8.65		276	3.70	9.28
	65	2.73	8.70		140	2.46	8.84	24	287	3.29	8.77
	66	3.10	8.55		141	4.00	8.75	Dec. 7	297	6.10	9.38
	67	2.79	8.96		142	3.28	8.67		298	4.05	9.09
	68	2.73	9.02		143	3.98	8.79		299	3.03	9.51
30	69	3.47	8.58	18	150	3.97	9.23		300	3.45	8.75
31	70	3.28	8.91		151	3.18	8.77		301	3.43	9.25
April 1	71	3.44	8.54		154	2.92	8.28		302	3.50	9.68
	72	2.85	8.65	27	169	2.94	9.05		303	3.68	9.44
	73	2.31	8.42		170	4.50	9.18				

Average percentage..... Fat, 3.60 ... Solids (not fat), 8.86

OTHER FOODS.

Slaughterhouses in Birkenhead.—There are no private slaughterhouses in Birkenhead. Several years ago a change of tenancy occurred in connection with the last remaining private slaughterhouse in the Borough, and the licence was not renewed.

The two public abattoirs are

- (a) The abattoirs within the Woodside Lairages ;
- (b) The Corporation abattoir at Trammere.

The abattoirs within the Woodside Lairages.

These include the main abattoirs, and an emergency abattoir at each of the two landing stages. They do not stand on the register of "registered" or "licensed" slaughterhouses; they came into existence under the first Foreign Animals Order, and have since remained as slaughterhouses for foreign or Irish animals according to the order in force for the time being. The Woodside Lairages are the property of the Mersey Docks and Harbour Board, and are maintained and administered by the Board.

Cleansing.—The abattoirs are cleansed daily as soon as killing and dressing are finished; and are specially scrubbed and cleansed every Thursday. (The weekly killing finishes on Wednesday and restarts on Friday morning.) The special cleansing on Thursday includes all utensils in the offal houses, racks, stands and tubs which may be in continuous use during the week. Fat boxes and gut barrels are sent out of the abattoirs directly they are filled.

The Corporation abattoir.

This is situated at New Chester Road and was opened in 1887.

Cleansing.—Two men are employed constantly in cleansing the abattoir, which is now closed overnight.

Food inspection.—The Meat and Food Inspector reports that during the year there were killed 111,273 oxen, 1,469 calves, 2,553 pigs, 2,869 sheep, 530 lambs, and 53 goats; as set out in Table F 2.

TABLE F 2.

Animals killed during 1920.

	Oxen	Calves	Pigs	Sheep	Lambs	Goats
At Woodside lairage.	110414	—	—	—	—	—
At Wallasey landing stage and No. 4 shed Wallasey Village	726	—	117	2649	—	53
At the Birkenhead Abattoir...	133	1469	2436	220	530	—
Totals	111273	1469	2553	2869	530	53

The total number of carcasses seized was:—

At Woodside	743	weighing	386,239 lbs.
At Wallasey Stage...	390	„	98,025 lbs.
At No. 4 Shed, Wallasey	25	„	1,068 lbs.
At Tranmere Abattoir	11	„	2,420 lbs.
Total ...	1,169	„	487,752 lbs.

The number of parts of carcasses seized was:—

At Woodside	1650	weighing	66,113 lbs.
At Wallasey Stage ...	27	„	2,080 lbs.
At No. 4 Shed, Wallasey	—	„	— lbs.
At Tranmere Abattoir	4	„	134 lbs.

Total ...	1,681	„	68,327 lbs.
-----------	-------	---	-------------

The total weight of offal seized was 217,118 lbs. The total weight of articles of food seized at various premises in the Borough was 16,007 lbs.

No action was taken during the year under Section 117 of the Public Health Act, 1875.

Carcasses condemned for tuberculosis.—During the year 670 carcasses and 1,560 parts of carcasses were condemned for tuberculosis.

SALE OF FOOD AND DRUGS ACTS.

During the year 314 samples were taken. Of these 304 were formal and 10 were informal. The articles sampled are set out in the following table.

TABLE F 3.
Samples taken during 1920.

Article	No. samples taken formally	No. samples taken informally	Article	No. samples taken formally	No. samples taken informally
Milk	111	2	Am. tincture quinine...	5	—
Butter	21	6	Camphorated oil ...	4	—
Self-raising flour.....	16	—	Evaporated milk ...	4	—
Margarine ..	14	—	Egg powder.....	3	—
Coffee	14	—	Cornflower ..	2	—
Lard	11	—	Epsom salts... ..	2	—
Cocoa	11	—	Cream of tartar	2	—
Rice	10	—	Soda, bi-carbonate ..	1	—
Cheese	10	—	Seidlitz powder ..	1	—
Sweets	10	—	Preserved cream	1	—
Jam	8	—	Cheese ...	1	—
Baking powder	7	—	Condensed machine-		
Condensed milk	6	—	skimmed milk.....	1	—
Mustard	6	—	Vinegar	1	—
Cream	5	—	Glycerine.....	1	—
White pepper	5	—	Honey	—	2
Malt vinegar	5	—			
Olive oil	5	—	Total.....	304	10

The total number of samples analysed during the year was 314.

Of the total number of samples analysed

27 samples of milk

3 „ cream

2 „ malt vinegar

1 sample of vinegar

1 „ butter

were reported adulterated and proceedings were taken in respect of:—

22 samples of milk

1 sample of cream.

With reference to the remaining samples reported adulterated the Health Committee, after consideration and hearing the vendors' explanation, decided it was inadvisable to institute proceedings, and the vendors were subsequently cautioned.

Informal samples.—All the samples taken informally for analysis during the year were found pure, with the exception of butter sample No. 282. A further sample was taken formally and this, on analysis, proved to be genuine.

Particulars of the defects found in those samples with regard to which proceedings were taken, and the result of the proceedings, are set out in Table F 4.

The composition of each sample of milk analysed during the year will be found in Table F 1, which has previously been referred to.

TABLE F 4.

Samples with reference to which proceedings were taken.

Nature of adulteration and result of proceedings.

1920 Quarter ending	Article	No. of sample	Adulteration	Fine inflicted
Mar. 31	Milk	20	5 per cent added water	Dismissed on warranty
	Milk	26	4 per cent added water	"
	Milk	27	2½ per cent added water	£5 including costs
	Milk	28	4 per cent added water	£5 "
	Milk	61	9 per cent deficient in fat	£2 "
	Milk	62	23 per cent deficient in fat .. .	£1 "
	Milk	64	9 per cent deficient in fat .. .	£2 "
	Milk	65	9 per cent deficient in fat .. .	£2 "
	Milk	67	7 per cent deficient in fat .. .	£1 "
	Milk	68	9 per cent deficient in fat .. .	£1 "
June 30	Milk	72	5 per cent deficient in fat .. .	£2 "
	Milk	73	23 per cent deficient in fat .. .	£2 "
	Milk	81	8 per cent added water	£1 "
	Milk	84	5 per cent added water	£1 "
	Milk	85	9 per cent deficient in fat .. .	£1 "
	Milk	86	8 per cent deficient in fat .. .	Dismissed on warranty
	Milk	87	5 per cent deficient in fat .. .	£1 10/- including costs
	Milk	95	3 per cent added water	£1 10/- "
	Milk	115	17 per cent deficient in fat .. .	£2 "
	Milk	116	24 per cent deficient in fat .. .	£2 "
Sept. 30	Milk	140	7.8 per cent deficient in fat .. .	£1 10/- "
	Cream .. .	148	Boric acid 0.1 per cent	Dismissed on payment of costs £1 10/-
Dec. 31	Milk	176	10 per cent added water .. .	£2 10/- including costs
	Margarine ..	181	Sold in unstamped wrapper ..	6/- "
	Margarine...	181	Quantity exposed for sale unmarked	6/- "
	Margarine...	285	Sold in unstamped wrapper ..	10/- "

TUBERCULOSIS.

ADMINISTRATIVE ARRANGEMENTS.

The arrangements made by the Birkenhead Corporation for dealing with tuberculosis in the area include

(a) The provision of a dispensary or clinic, opened in 1913. (This clinic is used on one half-day each week in connection with cases from the area of the administrative county of Chester.)

(b) The provision of garden shelters (two) for suitable cases at a small rent.

(c) The retention since August, 1914, of twelve beds at Leasowe Hospital for cases of surgical tuberculosis in children.

(d) A joint arrangement with the Cheshire County Council, and the Councils of the County Boroughs of Wallasey, Chester, Stockport, and Stoke-on-Trent, for the provision of a sanatorium at Burntwood. This arrangement has been under review during the past year, and it has been decided that the number of beds available for Birkenhead cases should be increased from 24 (the original proposal) to 32.

(e) The provision of a residential institution at Thingwall, Cheshire. This institution was originally conceived as a smallpox hospital; subsequently, the possibility of treating cases of tuberculosis here was considered and the original design modified. During the past year the Health Committee have further considered this question; and it is felt that the institution should be regarded as primarily a tuberculosis sanatorium and only used for smallpox purposes in the event of an extensive outbreak of that disease. The construction of the institution was completed during 1920; accommodation for 40 patients will be available.

Staff.—The medical and nursing staff engaged on tuberculosis work at the end of 1920 consisted, in addition to the Medical Officer of Health as principal medical officer, of an assistant medical officer (Dr. H. Mason Leete) and the equivalent of two whole time nurses.

The Corkhill Fund.—Under the will of the late Mr. John Lloyd Corkhill, of Oxtou, a sum of money was provided for the assistance of persons suffering from consumption. By arrangement with the trustees, persons applying for help from the charity are passed through the municipal clinic for classification; and the trustees have been largely guided by the recommendations of the medical staff of the clinic.

New arrangements made during past year.

Keeping of records.—The method of keeping records at the clinic has been completely revised during the year and a new system substituted.

Co-ordination with school clinics.—All children examined by the medical staff engaged on school medical inspection and suspected to be suffering from tuberculosis are now referred to the tuberculosis clinic for examination. The fullest co-ordination has been established between these two sections of the work of the department.

Home visiting.—The home visiting of notified cases of tuberculosis is now carried out under the joint schemes referred to in the preface (page viii.).

Farm colony.—The Cheshire County Council's scheme for the establishment of a farm colony at Wrenbury Hall was under consideration during the year, and it has been agreed that the Birkenhead Corporation will send any patients from this area requiring this form of treatment to this institution.

The main object of the colony will be to train patients in suitable occupations and to find employment for them when trained. The principal occupations dealt with will necessarily be agriculture and horticulture, but other forms of work will also be taken up.

Arrangements proposed or contemplated.

Extension of arrangements for surgical tuberculosis.—In a circular issued by the Ministry of Health, dated 9th March, 1920, reference is made to the deficient accommodation available in the country generally for treatment in residential institutions of non-pulmonary tuberculosis and the attention of local authorities is directed to the importance of at once formulating proposals for the provision of institutions for the treatment of this form of the disease. It is pointed out that the treatment of non-pulmonary tuberculosis, especially tuberculosis of the bones and joints, requires the provision of expensive apparatus and the employment of specially trained surgeons; and that except where a council is likely to require at least 100 beds for the use of its own area it will ordinarily be desirable, in the interests of economy, for residential provision of this kind to be undertaken jointly by two or more councils. It was further urged that steps should be taken without delay to confer with neighbouring councils with a view to the submission of proposals to the Ministry for the establishment of joint institutions before the 30th June, 1920.

On Friday, 9th April, 1920, a meeting of the Medical Officers of Health from administrative areas in the counties of Lancashire and Cheshire was held at the Hospital for Children, Leasowe, and at this meeting the points raised in the Ministry's circular were discussed. It was generally agreed that as a working basis it might be taken that for any area 1 bed for the residential treatment of surgical tuberculosis would be required for each 5,000 of the population. On this estimate Birkenhead would require 30 beds as compared with 12 beds as at present provided. The question as to whether accommodation might be provided at Leasowe for patients—both children and adults—from the neighbouring areas in Lancashire and Cheshire was tentatively discussed and it was agreed that as early as possible a joint conference of representatives of local authorities concerned should be convened.

Subsequently several conferences of representatives from Liverpool, Birkenhead, Oldham, St. Helens, Wallasey, and other areas concerned, and of the Leasowe Hospital, were held; and a deputation interviewed the Chief Medical Officer of the Ministry of Health.

At the end of the year the Leasowe Hospital authorities had in hand the preparation of plans showing an extension of the hospital to accommodate 20 adults and 180 additional children.

Dental treatment.—Many of the cases selected at the clinic as suitable for sanatoria are urgently in need of dental treatment. It is hoped that during the coming year it will be possible to arrange for the treatment to be given at the Education Committee's dental clinic at Mount Grove.

PREVALENCE OF, AND MORTALITY FROM, TUBERCULOSIS.

Notifications.—The total number of primary cases of tuberculosis notified during 1920 was 268—195 pulmonary and 73 non pulmonary. An analysis of these cases with reference to age and sex will be found in Table T 1 (page 36).

Mortality.—The total number of deaths certified as due to tuberculosis of patients who had previously been notified as suffering from the disease was 122—100 pulmonary and 22 non-pulmonary.

The total number of deaths certified as due to tuberculosis of patients who had *not* previously been notified as suffering from tuberculosis was 50—16 pulmonary and 34 non-pulmonary.

Adding these together, the total number of deaths certified as due to tuberculosis was as follows:—

Pulmonary	116
Non-pulmonary	56
Total	172

The number of deaths, certified as due to *other causes*, of patients who had previously been notified as suffering from tuberculosis was 3; the certified cause of death being gastro-enteritis 1, bronchiectasis 1, suicide 1.

An analysis of the tuberculosis mortality for the past ten years will be found in Table T 2 (page 36).

Number of known cases.—After making deductions for patients who had died during the year, or who had permanently left the district, or whose names have been taken off the register as provisionally cured (cases who have shown no signs or symptoms of active tuberculosis during two complete calendar years), the total number of known cases of tuberculosis in Birkenhead at the end of 1920 was as follows:—

	Insured persons	Dependants of insured person	Neither insured persons nor dependants	Total
Pulmonary.....Male.....	368	104	47	519
Female	106	61	192	359
Non-pulmonary...Male	39	167	7	213
Female	26	150	22	198
Total...Male.....	407	271	54	732
Female	132	211	214	557
Total.....	539	482	268	1289

Efficiency of system of notification.—The notification of tuberculosis is of comparatively little practical value unless cases are notified in the earliest stages of the disease.

While bearing in mind that different cases of pulmonary tuberculosis run different courses—some developing rapidly with death at the end of a few months, and others running a very chronic course of many years—it would appear to be justifiable to regard three years as a reasonable average or mean period.

A useful index of the efficiency of the system of notification in force can be obtained by noting, with regard to all cases of death from tuberculosis, the length of the period, prior to death, during which the existence of the case as one of tuberculosis was known to this department.

An investigation on this question was carried out during 1920, and a summary of the results obtained is given below:—

Of the 116 patients who died from pulmonary tuberculosis during 1920, those who had been notified

Over four years numbered ...	13 (11.2% of total)
Under „ „ „ „ ...	1 (0.9 „)
Under three years „ „ ...	5 (4.3 „)
„ two „ „ ...	11 (9.5 „)
„ one year „ „ ...	18 (15.5 „)
„ six months „ „ ...	8 (6.9 „)
„ three months „ „ ...	21 (18.1 „)
„ one month „ „ ...	12 (10.3 „)
„ one week „ „ ...	11 (9.5 „)

and those who had not been

notified numbered 16 (13.8 „)

Thus only 48.2% of these cases—less than half—were notified to this department three months or more before death.

Of the 56 patients who died from non-pulmonary tuberculosis during 1920 those who had been notified

Under three years numbered	1 (1.8% of total)
„ two years „ „	3 (5.3 „)
„ one year „ „	1 (1.8 „)
„ three months „ „	2 (3.6 „)
„ one month „ „	3 (5.3 „)
„ one week „ „	12 (21.4 „)

and those who had not been

notified numbered 34 (60.8 „)

It will be evident from the result of this investigation that only a small fraction of the cases of tuberculosis which occur in the Borough are notified at a sufficiently early date to allow of any effective steps being taken by the local authority in the direction of securing appropriate treatment.

CASES DEALT WITH THROUGH THE TUBERCULOSIS CLINIC.

Attendances of patients at the clinic.—During the year 963 patients paid 2,007 visits at the tuberculosis clinic. Of these 594 had not attended before; the remaining 369 had been to the clinic during the previous year.

Classification of new cases.—The 594 new patients who attended during the year were classified as follows:—

	Insured	Dependent	Neither	Total
Classed as tuberculous..... Males	164	75	8	247
Females	32	81	29	142
Classed as non-tuberculous...Males	45	33	3	81
Females	4	24	8	36
Classed as "suspect" .....Males	35	14	2	51
Females ...	6	29	2	37
Total.....Males	244	122	13	379
Females	42	134	39	215
Total.....	286	256	52	594

Pensions cases.—Included in the 594 new patients were 71 patients examined for pensions purposes, with the following results:—

Found to be suffering from pulmonary tuberculosis	28
" non-pulmonary	2
Classed as suspects	4
Found to be free from active tuberculosis	32
	—
	71
	—

In addition to the above 196 old cases were examined for pensions purposes.

Consultations with private medical practitioners.—Consultations between the medical staff of the clinic and general medical practitioners during the year numbered 356.

Sanatorium benefit.—Under an agreement between the Corporation and the Birkenhead Insurance Committee, all insured persons who apply for what is known as " sanatorium benefit " are examined and reported on by the Assistant Medical Officer of Health engaged on tuberculosis work. " Sanatorium benefit " covers not only treatment in sanatoria, but in hospitals, dispensaries, and the patients' own homes. After a patient is examined he is recommended to the Insurance Committee as suitable for one or other of these forms of treatment.

During the year 66 (53 new cases and 13 old cases) were dealt with at the clinic, 64 of whom were found to be suffering from pulmonary and 2 from non-pulmonary tuberculosis. Residential treatment was recommended in 43 cases, and dispensary and home treatment in 23 cases.

Further particulars with regard to this subject will be found in Table T 3 (page 36).

Examination of contacts.—It has been found possible to carry out only a limited amount of work during the year in this connection. 78 persons who had been in close contact with known cases of tuberculosis were examined either at the clinic or at their own homes. Of these,

37 were found to be suffering from pulmonary tuberculosis, 26 not suffering from tuberculosis, and 15 were classified as "suspect."

It is to be hoped that it will be possible greatly to extend this branch of the work in the future. The detection of cases of tuberculosis in the very earliest stages is all-important; unless a very great proportion of the energy directed to the control of the disease is expended in this direction little progress can be expected.

Laboratory work.—At the clinic 387 specimens of sputum and fluids suspected to contain tubercle bacilli were examined. Of these, 165 were from patients attending the clinic, and 222 were sent in by private medical practitioners.

HOME VISITING, DISINFECTION, ETC.

During the year the health nurses paid 217 first visits and 3,023 re-visits to the homes of patients.

The number of houses disinfected after death or removal of patients was 137.

Spitting flasks were provided free of charge to 86 patients.

LEASOWE HOSPITAL.

Full use has been made during the year of the twelve beds reserved by the Corporation at Leasowe Hospital for cases of surgical tuberculosis among Birkenhead residents.

There were 12 cases in hospital at the beginning of the year; 12 new cases have been admitted during the year, and 13 have been discharged or died; leaving 11 patients in hospital at the end of December.

The localisation of the disease in the 24 patients under treatment during the year was as follows:—

Tuberculosis of spine	7
" hip	4
" elbow and cervical glands	1
" ankle	1
" cervical glands	5
" intestines	1
" peritoneum	2
" malar bone	1
" rib	1
" elbow	1
	<hr/>
	24
	<hr/>

The 13 cases discharged or died were as follows:—

Tuberculosis of spine	3	cured
" hip	1	incurable
" hip	2	cured
" glands	1	unsuitable
" glands	2	cured
" intestines ...	1	died
" peritoneum	1	improved
" rib	1	} removed by parents against Medical Officer's advice.
" ankle	1	

TABLE T 1.

New cases notified for first time during the year.

PRIMARY NOTIFICATIONS											
Age periods.....	0-1	1-5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	55-65	65 and up
Pulmonary—Males ..	—	1	6	7	9	11	24	25	12	6	1
Females ..	—	1	9	5	10	17	22	22	4	3	—
Non-pulmonary—Males.....	4	10	10	5	6	—	3	2	1	—	—
Females .	3	9	5	4	5	2	2	1	1	—	—
Totals.....	7	21	30	21	30	30	51	50	18	9	1

TABLE T 2.

Deaths from tuberculosis during the past ten years.

Year	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
Deaths from tuberculosis of the lungs—										
Number	160	150	168	141	173	177	172	167	146	116
Rate per 1000	1.21	1.12	1.23	1.02	1.23	1.24	1.18	1.13	0.97	0.76
A Males—										
Number	98	80	104	75	105	104	89	97	73	55
Rate	0.74	0.59	0.76	0.54	0.74	0.72	0.61	0.65	0.48	0.36
B Females—										
Number.....	62	70	64	66	68	73	83	70	73	61
Rate	0.47	0.52	0.47	0.47	0.48	0.51	0.57	0.47	0.48	0.40
Deaths from other forms of tuberculosis—										
A Males (all ages)										
Number	31	34	32	23	44	36	36	40	24	36
Rate	0.23	0.25	0.23	0.16	0.31	0.25	0.24	0.27	0.16	0.23
B Females (all ages)										
Number	20	23	27	23	23	25	33	26	14	20
Rate	0.15	0.17	0.19	0.16	0.16	0.17	0.22	0.17	0.09	0.13
C Children (under 5 yrs)										
Number	36	35	39	27	42	44	44	36	22	26
Rate	0.27	0.26	0.28	0.19	0.29	0.30	0.30	0.24	0.14	0.17

TABLE T 3.

Administration of sanatorium benefit.

Treatment recommended	Discharged soldiers	Males	Females	Total
Sanatorium.....	7	17	8	32
Hospital	6	3	2	11
Domiciliary	8	4	1	13
Dispensary	10	—	—	10
Total.....	31	24	11	66

VENEREAL DISEASES.

ADMINISTRATIVE ARRANGEMENTS.

The scheme which was adopted by the Council in July, 1917, in relation to the diagnosis and treatment of venereal diseases was given in full in the annual report for 1917 (page 29 et seq.).

During 1920 consideration was given to the revision of this scheme and a modification of the financial arrangement between the Corporation and the Borough Hospital was arrived at, dating back to 2nd August, 1919, and to terminate on 31st March, 1921.

The principal features of the new arrangement are that there will be five weekly clinics instead of four—three male and two female; that four beds instead of two will be provided in detached wards for in-patient treatment; and that the Council will have the benefit of certain services of the resident house surgeons, the part-time services of a sister, two nurses, an orderly, and a dispenser.

The official hours at which patients may now be seen are:—

Women—Tuesdays, 3 p.m. and 6 p.m.

Men—Mondays, Wednesdays and Fridays, 6 p.m.

The Medical Officer is responsible for the general organisation and administrative supervision of the work.

Dr. Dalzell has carried on the clinical work of the centre throughout the year.

Bacteriological work in connection with patients seen at the clinic and by private practitioners is carried out by Professor Beattie at Liverpool University.

TREATMENT CARRIED OUT AT THE CLINIC.

During the year 1,138 persons were dealt with as out-patients at the clinic. These made 4,412 attendances.

The aggregate number of "in-patient" days was 1,699.

Full details are set out in Tables V 1 and V 2.

TREATMENT OF BIRKENHEAD PATIENTS CARRIED OUT AT OTHER TREATMENT CENTRES.

So far as has been ascertained from official returns which have been received from other areas, 51 Birkenhead patients attended other treatment centres as shown in Table V 3.

ISSUE OF SALVARSAN SUBSTITUTES.

Salvarsan substitutes were issued during the year by the Medical Officer of Health

To the Medical Officer of the treatment centre at the Borough Hospital

To the Medical Officer, Birkenhead Union Infirmary

To one approved local practitioner.

BACTERIOLOGICAL WORK.

Professor Beattie examined 674 specimens, 667 of these being sent from the clinic and 7 from private medical practitioners. Of the specimens sent 662 were for the Wasserman reaction and 12 for the detection of gonococci.

PROPAGANDA.

The following lectures were given under the auspices of the Merseyside Boroughs Branch of the National Council for Combating Venereal Diseases, to which the Birkenhead Corporation pays an annual contribution:—

(a) Meetings and Lectures in Birkenhead:—

March 23rd—Shop Stewards, Messrs. Cammell Lairds'.

March 29th—

March 25th—Shop Stewards, Messrs. Clover, Clayton's.

April 16th—Shop Stewards, Messrs. Grayson's.

April 30th—Birkenhead Gas Workers, Recreation Room.

Lecturer at above, Dr. Morrison, O.B.E.

(b) July 24th—Conference of Women, St. Aidan's College.

Lecturer, Miss B. Vivian, organising secretary to the branch.

(c) October 14th—Display of Film, "Damaged Goods," at Y.M.C.A. Hall, Grange Road.

Lecturer, Dr. Morrison, O.B.E.

At these meetings pamphlets dealing with various aspects of the subject of venereal diseases were distributed, copies of which may be had on application.

TABLE V 1.

Statement showing the services rendered at the Venereal Diseases Clinic during the year, classified according to the diseases dealt with.

	Syphilis		Soft chancre		Gonorrhœa		Conditions other than venereal		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1. Number of persons who, on the 1st January, 1920, were under treatment or observation for ...	332	60	2	—	160	13	19	5	513	78
2. Number of persons dealt with during the year at or in connection with the out-patient clinic <i>for the first time</i> and found to be suffering from—										
Syphilis only	227	59	—	—	—	—	—	—	227	59
Soft chancre only	—	—	4	—	—	—	—	—	4	—
Gonorrhœa only	—	—	—	—	179	12	—	—	179	12
Syphilis and soft chancre	—	—	—	—	—	—	—	—	—	—
Syphilis and gonorrhœa	14	11	—	—	14	11	—	—	28	22
Gonorrhœa and soft chancre	—	—	—	—	—	—	—	—	—	—
Syphilis, soft chancre & gonorrhœa	—	—	—	—	—	—	—	—	—	—
Conditions other than venereal ...	—	—	—	—	—	—	8	8	8	8
Total—Item 2	241	70	4	—	193	23	8	8	446	101
Total—Items 1 and 2	573	130	6	—	353	36	27	13	959	179
3. Number of persons who ceased to attend the out-patient clinic										
(a) before completing a course of treatment for	179	64	—	—	162	13	9	6	350	83
(b) after completion of a course of treatment, but before final tests as to cure, of	2	2	—	—	1	—	—	2	3	4
4. Number of persons transferred to other treatment centres after treatment for	—	—	—	—	—	—	—	—	—	—
5. Number of persons discharged from the out-patient clinic after completion of treatment and observation for	—	—	—	—	—	—	—	—	—	—
6. Number of persons who, on the 1st January, 1921, were under treatment or observation for ...	392	64	6	—	190	23	18	5	606	92
Total—Items 3, 4, 5 and 6	573	130	6	—	353	36	27	13	959	179
7. Total attendances of all persons at the out-patient clinic who were suffering from	2565	708	2	—	1013	59	38	27	3618	794
8. Aggregate number of "in-patient days" of treatment given to persons who were suffering from	1092	369	—	—	125	113	—	—	1217	482
9. Examinations of pathological material—										
(a) Specimens which were examined at, and by the medical officer of, the treatment centre					Spirochetes	Gonococci	For detection of Other organisms		For Wassermann reaction	
(b) Specimens from persons attending at the treatment centre, which were sent for examination to an approved laboratory					—	—	—		—	
					—	7	—		579	

TABLE V 2.

Statement showing the services rendered at the Venereal Diseases Clinic during the year, classified according to the areas in which the patients resided.

	Birkenhead	Liverpool	Wallasey	Montgomery-shire	Lancashire	Newport	Chester	Cheshire	Glasgow	Nantyglog, S. Wales	Total
A. Number of persons from each area dealt with during the year, at or in connection with the out-patient clinic <i>for the first time</i> , and found to be suffering from—											
Syphilis	294	7	2	1	3	1	—	1	2	—	311
Soft chancre	1	—	3	—	—	—	—	—	—	—	4
Gonorrhœa	201	6	—	—	—	—	4	4	—	1	216
Conditions other than venereal...	10	3	1	—	1	—	—	1	—	—	16
Total	506	16	6	1	4	1	4	6	2	1	547
B. Total number of attendances at the out-patient clinic of all patients residing in each area	4256	61	27	1	38	1	8	8	10	2	4412
C. Aggregate number of "in-patient days" of all patients residing in each area	1699	—	—	—	—	—	—	—	—	—	1699
D. Number of doses of salvarsan substitute given in the—											
1. Out-patient clinic	1812	55	23	—	36	—	3	2	10	1	1942
2. In-patient department	—	—	—	—	—	—	—	—	—	—	—
to patients residing in each area											

The salvarsan substitutes used in the treatment of syphilis are—

Novarsenobillon—Initial dose, '3 gms. Final dose, '9 gms.

Galyl....., 10 cgs. „ 30 cgs.

Nine doses of salvarsan substitutes are usually given in a full course of treatment.

In the treatment of syphilis, salvarsan substitutes are used in all cases.

TABLE V 3.

Statement showing particulars of Birkenhead cases treated at Venereal Diseases Clinics in other areas.

Name of town	No. of patients	Disease	Attendances at out-patient clinic	No. of in-patient days	Doses of salvarsan substitutes given in	
					Out-patient clinic	In-patient department
Liverpool (David Lewis Northern Hos.)	20	Syphilis 6 Gonorrhœa 12 Conditions other than venereal 2	325	—	8	—
Liverpool (Royal South- ern Hospital)	15	Syphilis 7 Gonorrhœa 5 Conditions other than venereal 3	54	45	12	—
Wallasey	14	Syphilis 3 Soft chancre 2 Gonorrhœa 7 Conditions other than venereal 2	59	—	16	—
South Shields ...	2	Gonorrhœa 4	4	—	—	—

OTHER INFECTIOUS DISEASES.

INFECTIOUS DISEASES WHICH ARE NOTIFIABLE.

The infectious diseases which (in addition to tuberculosis, already dealt with) were compulsorily notifiable to the Medical Officer of Health at any time during the past year are as follows:—

Smallpox.
Scarlatina.
Diphtheria and membranous croup.
Erysipelas.
Typhus fever.
Typhoid fever.
Continued fever.
Relapsing fever.
Cerebro-spinal meningitis.
Acute encephalitis lethargica.
Acute polio-encephalitis.
Acute poliomyelitis.
Puerperal fever.
Ophthalmia neonatorum.
Cholera.
Pneumonia (acute primary and influenzal).
Malaria.
Dysentery.
Trench fever.

Cases notified in 1920.—During the year 861 cases of infectious diseases other than tuberculosis were notified to me. These are set out in Tables I 1 and I 2.

TABLE I 1.

Infectious diseases other than tuberculosis notified during 1920 ;
showing seasonal incidence.

Disease	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Smallpox	—	—	—	—	2	1	—	—	—	—	—	—	3
Scarlatina	43	27	23	22	18	21	20	9	24	29	32	22	290
Diphtheria and membra- nous croup	23	21	19	7	17	11	11	16	19	13	14	16	187
Erysipelas	12	5	5	4	7	3	3	2	3	5	3	2	54
Typhus fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Typhoid fever	—	—	—	1	—	—	1	—	—	1	2	1	6
Continued fever.....	—	—	—	—	—	—	—	—	—	—	—	—	—
Relapsing fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebro-spinal meningitis	—	1	—	—	1	—	1	—	—	—	—	—	3
Encephalitis lethargica (acute).....	—	—	—	1	—	—	—	—	—	—	1	—	2
Polio-encephalitis (acute)	—	—	—	—	—	—	—	—	—	—	—	—	—
Poliomyelitis (acute).....	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal fever	5	2	4	—	1	3	—	—	—	1	2	—	18
Ophthalmia neonatorum	3	6	—	3	5	4	1	1	2	3	2	2	32
Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—
Pneumonia	31	31	38	22	12	4	10	6	9	12	21	37	233
Malaria	6	8	2	2	—	1	6	2	—	1	2	1	31
Dysentery	—	1	—	—	—	—	—	—	1	—	—	—	2
Trench fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	123	102	91	62	63	48	53	36	58	65	79	81	861

TABLE I 2.

Infectious diseases other than tuberculosis notified during 1920 ;
showing ages.

Disease	under 1 year	1 to 2 years	2 to 5 years	5 to 15 years	15 to 25 years	25 to 45 years	45 to 65 years	65 years upw rds	Total
Smallpox	—	—	—	—	2	1	—	—	3
Scarlatina	3	5	49	190	25	17	1	—	290
Diphtheria and membra- nous croup	3	5	34	117	16	12	—	—	187
Erysipelas	2	—	1	5	2	19	13	12	54
Typhus fever	—	—	—	—	—	—	—	—	—
Typhoid fever	—	—	—	2	1	1	2	—	6
Continued fever.....	—	—	—	—	—	—	—	—	—
Relapsing fever	—	—	—	—	—	—	—	—	—
Cerebro-spinal meningitis	—	—	1	2	—	—	—	—	3
Encephalitis lethargica (acute).....	—	—	—	—	—	—	2	—	2
Polio-encephalitis (acute)	—	—	—	—	—	—	—	—	—
Polio-myelitis (acute). ...	—	—	—	—	—	—	—	—	—
Puerperal fever	—	—	—	—	3	15	—	—	18
Ophthalmia neonatorum	32	—	—	—	—	—	—	—	32
Cholera	—	—	—	—	—	—	—	—	—
Pneumonia.....	34	22	31	37	20	57	23	9	233
Malaria	—	—	—	—	8	22	1	—	31
Dysentery	—	—	—	—	1	1	—	—	2
Trench fever	—	—	—	—	—	—	—	—	—
Total	74	32	116	353	78	145	42	21	861

Cerebro-spinal fever.—3 cases were notified during the year, viz.:—

Male, 9 years of age.

Male, 3 years of age.

Female, 8 years of age.

The material taken for bacteriological examination from two of the patients confirmed the diagnosis.

2 of the cases were removed to the Infectious Diseases Hospital. All 3 cases subsequently died.

1 male, aged 3 years, was certified to have died from cerebro-spinal fever, but upon a post mortem examination being made was found not to be a case of cerebro-spinal fever but one of tubercular meningitis and broncho-pneumonia. (Not included in cases notified. Notification withdrawn.)

Encephalitis lethargica.—2 cases were notified during the year, viz.:—

Male, 59 years of age.

Female, 57 years of age.

Both cases were treated at home, and subsequently died.

Information regarding a death of a Birkenhead resident—male, 7 years of age—occurring in Manchester was received.

Smallpox.—3 cases were notified as smallpox during the year, viz.:—

(1) Male, 35 years of age, an unemployed ex-service man. The patient attended at a Liverpool hospital as an out-patient for treatment of

psoriasis. A rash was noticed and he was removed to the smallpox hospital for observation. The case subsequently transpired to be one of chickenpox, not smallpox. 2 children of the patient were under treatment at the same time for chickenpox.

(2) Female, 15 years of age, employed in soap works.

(3) Female, 18 years of age, employed in soap works.

Both these cases were notified as suffering from smallpox and were removed to the smallpox hospital.

In each case all contacts were followed up and re-vaccinated where consent was obtained.

All 3 cases subsequently recovered.

NON-NOTIFIABLE INFECTIOUS DISEASES.

Influenza.—The mortality from influenza and pneumonia, week by week, together with the general mortality, is shewn in Table I 3.

TABLE I 3.

Mortality from influenza and pneumonia.

1920 Week ending	Total No. of deaths registered	Deaths from influenza	Deaths from pneumonia (all forms)	1920 Week ending	Total No. of deaths registered	Deaths from influenza	Deaths from pneumonia (all forms)
Jan. 7.....	34	2	2	July 7.....	30	—	—
14.....	53	—	6	14.....	27	—	4
21.....	39	—	6	21.....	29	—	1
28.....	47	—	7	28.....	42	—	2
Feb. 4.....	65	2	4	Aug. 4.....	31	2	—
11.....	40	1	3	11.....	37	—	3
18.....	55	4	8	18.....	31	—	1
25.....	58	1	14	25.....	17	—	1
Mar. 3.....	54	2	13	Sept. 1.....	35	—	3
10.....	45	3	6	8.....	36	—	3
17.....	47	1	7	15.....	28	—	3
24.....	51	4	10	22.....	26	—	2
31.....	43	3	7	29.....	32	—	5
April 7.....	46	1	9	Oct. 6.....	24	1	—
14.....	52	1	7	13.....	41	—	3
21.....	38	—	8	20.....	29	—	1
28.....	47	—	8	27.....	47	1	3
May 5.....	35	1	2	Nov. 3.....	39	—	3
12.....	37	1	1	10.....	40	—	2
19.....	43	1	4	17.....	29	—	4
26.....	44	1	2	24.....	27	—	3
June 2.....	34	—	2	Dec. 1.....	34	1	5
9.....	32	—	2	8.....	39	—	3
16.....	28	—	3	15.....	56	—	6
23.....	22	—	—	22.....	53	1	12
30.....	20	—	3	31.....	66	2	14

(9 days)

Anthrax.—From information received it was found that a considerable number of shaving brushes which were possibly infected with anthrax had been introduced into the Borough; and that they were being exposed for sale in various shops.

With a view to protecting the health of the public 17 visits were made to these shops by members of the staff and 90 supposed infected shaving brushes were received from various shopkeepers.

VACCINATION.

The following is the latest completed information relative to vaccination in the Borough and relates to the period 1st January, 1919, to 31st December, 1919, viz.:—

No. of births	3457
Successfully vaccinated	2550
Insusceptible	10
Had smallpox	—
Number in respect of whom statutory declarations of conscientious objection have been received	512
Died unvaccinated	241
Postponed by medical certificate	41
Removed to districts the vaccination officers of which were duly notified	32
Removed to places unknown or which cannot be traced...	36
In abeyance	37

DISINFECTION.

Books.—67 Public Library and 3 school library books were collected from infected houses and disinfected.

Dwellings.—341 house-disinfecting notices were served, and 747 houses or parts of houses were disinfected during the year.

Bedding and clothes.—Infected bedding and clothes were collected from 782 dwellings and disinfected at the disinfecting station. In 142 further cases infected or discarded bedding and clothes were destroyed.

Visits and revisits paid to houses, etc., by Disinfecting Inspector.—Inspector Isaac Taylor paid 4,892 visits and revisits to property during the year in connection with disinfection after infectious diseases (including tuberculosis).

Cleansing of persons.—A special bath is provided at the disinfecting station in Corporation Road for dealing with persons under the Cleansing of Persons Act, 1897. During the year one case was dealt with.

ISSUE OF DIPHTHERIA ANTITOXIN.

During the year in accordance with the provisions of the Diphtheria Antitoxin (outside London) Order, 1910, diphtheria antitoxin was issued to 20 medical practitioners; 43 phials of 2,000 units each being given out, a total of 86,000 units.

ISSUE OF ANTI-INFLUENZA VACCINE.

A supply of anti-influenza vaccine was received from the Ministry of Health during the early part of the year and was issued to 12 practitioners upon request. Of these, 4 did not use the vaccine. The 8 practitioners who used the vaccine treated 44 cases. 2 of the patients upon whom the vaccine was used were suffering from influenza at the time it was administered.

In no case has a history been obtained of a subsequent attack of influenza.

THE INFECTIOUS DISEASES HOSPITAL.

Accommodation and staff.—There has been no addition to the number of beds in the hospital during the year. The full staff consists of the Matron (Miss Emily Yeomans), 20 nurses, 22 female servants, a boilerman, 1 porter and 2 gardeners.

Cases treated during 1920.—At the beginning of the year there were 20 patients in hospital. New cases admitted during the year numbered 299, making a total of 319 patients dealt with.

The diseases treated, together with the sex of the patients and particulars as to recoveries and deaths, are shewn below.

TABLE I 4.

Patients sent in as suffering from	In hospital at beginning of year	Admitted during year	Died during year	Discharged cured during year	Remaining in hospital at end of year
Scarlet fever M.	4	75	2	68	9
F.	9	102	—	101	10
Diphtheria M.	4	43	2	40	5
F.	3	75	5	70	3
Enteric fever M.	—	1	—	—	1
F.	—	1	—	—	1
Cerebro-spinal meningitis ... M.	—	2	2	—	—
F.	—	—	—	—	—
Total	20	299	11	279	29

E. P. Smith memorial fund.—No suitable cases received benefit from this fund during 1920.

HOME NURSING.

An arrangement made between the Corporation and the Birkenhead District Nursing Society, dating from 1st July, 1919, provides for the home nursing of cases of influenza and pneumonia. During the year 1920 the Society's nurses paid 1,781 visits in respect of 121 cases.

MENTAL DEFICIENCY.

ADMINISTRATIVE ARRANGEMENTS.

The work of dealing with cases of mental deficiency in the Borough in accordance with the provisions of the Mental Deficiency Act, 1913, is carried out under the Mental Deficiency Committee, with the Town Clerk as clerk to the committee.

Mentally defective children between the ages of 7 and 16 are dealt with by the Education Committee under the Elementary Education (Defective and Epileptic Children) Acts, 1899 and 1914.

At the end of 1920 the medical staff engaged on the work of ascertainment of cases, certification, etc., consisted of the Medical Officer of Health, with Drs. Leete and Smythe as Deputy Medical Officers; and 13 nurses gave part time to home visiting.

CASES DEALT WITH UNDER MENTAL DEFICIENCY ACT, 1913.

During the year 33 new cases were reported; bringing the total number of cases dealt with under the Mental Deficiency Act, 1913, since that Act came into force, to 145.

16 cases were sent to institutions under judicial orders; 1 case was placed under guardianship by judicial order; 6 cases were placed under supervision pending institutional vacancy arising; 6 cases were placed under home supervision; 1 case was admitted to the workhouse as a poor law case; 2 cases were transferred to institutions from guardianship.

6 cases died during the year.

21 first visits and 612 revisits were paid to the homes of mental defectives by the health nurses.

CASES DEALT WITH UNDER THE ELEMENTARY EDUCATION (DEFECTIVE AND EPILEPTIC CHILDREN) ACTS, 1899 and 1914.

Reference to this subject will be found in the school medical inspection section of this report (page 75).

HOUSING AND GENERAL SANITATION.

STAFF.

The staff engaged on the work of housing inspection consists, in addition to the Chief Inspector, of one general housing inspector and four district sanitary inspectors, who act as housing inspectors in the districts allotted to them.

NUMBER OF DWELLING HOUSES, ETC., IN BOROUGH.

At the time of the 1901 census the number of inhabited houses was 19,744, giving an average number of persons per house of 5.6; the number of houses in the Borough at the time of the 1911 census was 24,343, giving an average number of persons per house of 5.3.

The approximate number of dwelling houses of all descriptions within the Borough, including institutions, at 31st December, 1920, was 26,933.

The approximate number of schoolrooms, warehouses, etc., was 1,358.

NEW HOUSES ERECTED AND INSANITARY HOUSES
DEMOLISHED.

During 1920, 112 new houses were erected in the Borough, 108 of which were erected under the Corporation's housing schemes; and 1 house was demolished. The figures for the past seven years are as follows:—

			Erected	Demolished
January 1st to December 31st,	1914	.....	246	18
„	„	1915	..... 136	32
„	„	1916	..... 28	1
„	„	1917	..... 1	18
„	„	1918	..... Nil	36
„	„	1919	..... Nil	7
„	„	1920	..... 112	1
			<hr/> 523	<hr/> 113

The number of houses not complying with the building byelaws erected with the consent of the local authority under Section 25 of the Housing, Town Planning, etc., Act, 1919, was 108.

UNINHABITED PROPERTY.

The following is a return of uninhabited property in Birkenhead for the past year:—

District	Half-year ended 30th June, 1920					Half-year ended 31st Dec., 1920				
	Private houses	Shops	Cottages	Dock cottag's	Total	Private houses	Shops	Cottages	Dock cottag's	Total
Birkenhead.....	16	10	3	—	29	5	11	—	—	16
Claughton and Oxtou	30	2	—	67	99	51	2	3	64	120
Tranmere and Bebington ...	15	5	1	—	21	19	2	1	—	22
Totals ..	61	17	4	67	149	75	15	4	64	158

The total uninhabited and unoccupied property, 31st December, 1919, was 144, so that there was an increase of 14 at the end of 1920 as compared with the previous year.

STEPS TAKEN UNDER HOUSING ACTS.

During the twelve months ending December 31st, 1920, a large amount of work was carried out by the department under the provisions of the various Housing Acts, and the regulations made by the Local Government Board dated 2nd September, 1910. The particulars of this work are as follows:—

Inspection.

(1) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	586
(2) Number of dwelling-houses which were inspected and recorded under the Housing (Inspection of District) Regulations, 1910	538
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	—
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-heading) found not to be in all respects reasonably fit for human habitation	449

Remedy of defects without service of formal notices.

Number of defective dwelling-houses rendered fit in consequence of informal action by the local authority or their officers	2
---	---

Action under statutory powers.

A. *Proceedings under section 28 of the Housing, Town Planning, etc., Act, 1919.*

(1) Number of dwelling-houses in respect of which notices were served requiring repairs	239
(2) Number of dwelling-houses which were rendered fit—	
(a) by owners	126
(b) by local authority in default of owners	—

(3) Number of dwelling-houses in respect of which closing orders became operative in pursuance of declarations by owners of intention to close —

B. *Proceedings under Public Health Acts.*

(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied 379

(2) Number of dwelling-houses in which defects were remedied—

(a) by owners 329

(b) by local authority in default of owners —

No proceedings were taken during the year under sections 17 and 18 of the Housing, Town Planning, etc., Act, 1909; and no unhealthy areas were represented.

OTHER WORK IN CONNECTION WITH HOUSING AND GENERAL SANITATION.

In addition to the housing work outlined above, other work, of which the following is a summary, was carried out during the year. (The work of scavenging, removal of refuse, flushing of drains, and care of sewers is entirely dealt with by the Borough Surveyor's department.)

Number of unhealthy conditions reported and investigated	8309
Number of formal notices given	3913
Number remedied after formal notice and without proceedings	3913
Number of cases in which proceedings had to be taken	1
Number abated after proceedings.....	1
Defects referred for action:—	
(a) to Borough Surveyor	721
(b) to Water Engineer	388
(c) to Borough Treasurer	90
Number of excavations made for the purpose of testing the condition of house drains	55
Number of smoke tests applied to drains of premises reconstructed under the supervision of this department	47
Number of water tests applied to drains	58
Number of smoke tests applied to the drains of new buildings, in conjunction with the Borough Surveyor's department	4
Smoke nuisances from factory and other chimneys ...	4
Number of schools specially examined by the district inspectors	35

Visits to premises.—During the year 25,025 visits were paid by the inspectors, as follows:—

Inspector A. Longstaff (Special Housing Inspector) ...	4579
.. J. Croshaw	5093
.. J. Lee	4765
.. H. T. Taylor	4930
.. W. H. Tilston	5658

25,025

Increase of Rent and Mortgage Interest (Restriction) Act, 1920.—

This Act came into operation on the 2nd July, 1920. Up to the 31st December, 1920, 81 applications for certificates under section 2 of the Act were received and considered by the Health Committee. 76 certificates were granted and 5 refused.

Theatres, music halls, &c.—In compliance with a request of the Ministry of Health contained in Circular No. 120 dated 25th August, 1920, an inspection was made of conditions existing in the various theatres, music halls, and other places of entertainment in the Borough with reference to ventilation, structure of dressing rooms, etc. The matter was fully reported upon to the Health Committee on the 19th October, 1920, and a copy of the schedule of the various buildings setting forth the result of the inspection was also forwarded to the Clerk to the Borough Justices for the information of the licensing authorities.

Rats and mice.—The following is a summary of the work carried out by the district inspectors under the provisions of the Rats and Mice (Destruction) Act, 1919, which came into operation on 1st January, 1920:—

No. of premises inspected	111
No. of visits and revisits	463
No. of notices served	45
No. of premises satisfactorily dealt with	103
No. of premises still under observation or where work is being carried out	8

INSPECTION OF LODGING HOUSES, ETC.

During the year the inspector of common lodging houses, etc., paid regular visits to common lodging houses, and houses let in lodgings, and to the Corporation tenement dwellings. The following is a summary of the work done:—

Registered common lodging houses (17 in number):	
Day inspections	4317
Night inspections	459
Insanitary conditions reported and dealt with	40
Houses let in lodgings (778 in number):	
Day inspections	2541
Night inspections	3
Insanitary conditions reported and dealt with	214
Corporation tenement dwellings (132 in number):	
Visited weekly.	
Insanitary conditions reported and dealt with	206

SHOPS, FACTORIES, AND WORKSHOPS.

SHOPS ACTS, 1912—1920.

Shops (Early Closing) Act, 1920.—On the 3rd December, 1920, the "Shops (Early Closing) Act, 1920," came into operation.

This Act provides for the temporary continuance of certain orders for the early closing of shops made by the Secretary of State under the Defence of the Realm (Consolidation) Act, 1914, and has the effect in the area of any local authority as if it were a closing order made and confirmed under the Shops Act, 1912.

The Act continues in force until the 31st day of December, 1921.

Petition from grocers.—On the 17th February, 1920, a petition was received from the grocers in the Borough asking that a closing order should be made under the Shops Act, 1912, regarding their trade.

The register of grocers was brought up to date and enquiries made, and subsequently a vote was taken; but as the prescribed majority specified by the Act did not approve of the proposal the Health Committee resolved that no further steps be taken in the matter.

Visits paid.—The total number of visits paid to the various shops in the Borough under the provisions of the above Acts, and Orders made thereunder, during the year was 5,307.

Infringements reported and proceedings taken.—63 infringements were reported and 45 letters of warning sent in connection therewith. In 3 cases proceedings were taken for failing to close shops for the sale of certain articles on the weekly half-holiday, and fines of 10/-, 14/-, and 14/-, including costs, were imposed.

FACTORY AND WORKSHOP ACTS, 1901 AND 1907.

The following is a summary of the report furnished by the Medical Officer of Health to the Secretary of State (Home Office) on the administration of the Factory and Workshop Act, 1901, in connection with factories, workshops, workplaces, and homework:—

Inspection.—2,297 inspections were made during the year—factories 2, workshops 2,234, workplaces 61.

13 written notices were sent in respect of workshops.

There were no prosecutions during the year.

Defects.—The defects found in factories, workshops and workplaces were as follows:—

	No. of defects			Number of prosecutions
	Found	Remedied	Referred to H.M. Inspector	
Want of cleanliness	3	3	—	—
Other defects (P. H. Acts)	25	25	—	—
Sanitary accommodation—				
Insufficient	1	1	—	—
Unsuitable or defective	1	1	—	—
Not separate for sexes	—	—	—	—
Breach of special sanitary requirements for bakehouses	27	27	—	—
Other offences (F. & W. Acts)	9	9	3	—
Total.....	66	66	3	—

Home work.—Lists were received from employers as follows:—

From employers sending twice in the year—16 lists (10 contractors, 18 workmen).

From employers sending once in the year—11 lists (3 contractors, 25 workmen).

In each case the work handled was the making of wearing apparel.

Registered workshops.—The workshops on the register at the end of the year were:—

Bakehouses	61
Confectioners	43
Laundries	44
Other workshops	345
	<hr/>
	493

Other matters.—During the year 3 instances of failure to affix the abstract of the Factory and Workshop Acts were dealt with.

At the end of the year there were 32 underground bakehouses in use in the Borough.

RAG FLOCK ACT, 1911.

Pursuant to the provisions of the above Act, 96 visits were made.

At the time of these visits the rag flock being used or stored on the premises was to all appearance in a satisfactory condition; no samples were, therefore, taken for the purpose of analysis.

MATERNITY AND CHILD WELFARE.

ADMINISTRATIVE ARRANGEMENTS.

Arrangements have been made by the local authority for carrying out the provisions of:—

1. The Notification of Births Acts, 1907 and 1915.
2. The Midwives' Acts, 1902 and 1918.
3. The Maternity and Child Welfare Act, 1918.

The authority's scheme now includes:—

1. Inspection of midwives practising in the area.
2. Health visiting.
3. The provision of three post-natal clinics.
4. The provision of an ante-natal clinic.
5. The supply of free milk, etc., for necessitous mothers and infants.
6. Home visiting in connection with cases admitted to the Birkenhead Day Nursery.
7. The provision of 4 beds at the Birkenhead Borough Hospital for cases referred from the clinics.
8. The provision of 3 beds at the Leasowe Hospital Baby Annexe for wasting infants.
9. The provision of home nursing for children under five suffering from certain diseases, and for expectant and nursing mothers.
10. Financial support of certain institutions engaged in work in the interests of mothers and infants belonging to the Borough, namely, St. Paul's Eye Hospital, Birkenhead Day Nursery, Birkenhead and District Rescue Association, The Birkenhead and Wirral Invalid Children's Association, and The Birkenhead Maternity Hospital.

The infant welfare or post-natal clinics are held at Hamilton Square, Brassey Street, and St. Paul's Road. The Hamilton Square clinic was opened in 1916; the other two clinics in 1919.

The arrangements for home nursing came into force on 1st July, 1919. An agreement between the Corporation and the Birkenhead District Nursing Society provides for the nursing at home of cases of ophthalmia neonatorum; of measles, whooping cough, epidemic diarrhoea, and poliomyelitis in children under the age of five years; and of illnesses of women associated with pregnancy and confinement.

New arrangements made during past year.

Ante-natal clinic.—An ante-natal clinic was opened at No. 9, Hamilton Square, on 19th February. The need for a special clinic for expectant mothers had for some time been appreciated by the Maternity and Child Welfare Committee, and its establishment will allow of much valuable work being done. On February 5th a meeting was held of the midwives practising in the borough, at which over 40 attended. The Medical Officer explained the objects aimed at and the methods which would be followed in running the clinic, and asked the midwives to co-operate with the work in every way.

Canteen at Hamilton Square clinic.—Arrangements have been made for the provision of tea at cost price for the mothers attending the Hamilton Square post-natal clinic. These came into force on 1st November, 1920.

Sale of cod liver oil, etc., at clinics.—Since the beginning of 1920 malt, cod liver oil, and certain other preparations have been sold at cost price at the various clinics, when prescribed by the doctor in attendance.

Further arrangements contemplated or suggested.

Lectures to midwives.—The desirability of providing a course of post-graduate lectures to midwives was considered during the year and it is hoped to arrange for these during 1921.

Prevention of ophthalmia neonatorum.—Ophthalmia neonatorum, which is such a prolific cause of blindness, is contracted from infection conveyed to the eyes of infants during birth. As is recorded below, one child affected with this disease during the past year lost the sight of an eye, the eye having to be removed. With a view to securing preventive treatment at the earliest possible moment the supply of a non-toxic preparation of silver nitrate to practising midwives has been decided upon; this will be available early in 1921.

Maternity bags.—In a considerable number of confinements attended by midwives in the borough the home circumstances are such that proper provision and equipment for the confinement cannot be made. It would be of great advantage if a number of maternity outfits were kept at the clinics and loaned out to suitable cases of this description.

Sewing classes.—The opening of sewing classes at the clinics, where model garments can be demonstrated, and instruction given in cutting out, is a development greatly needed. Many young mothers and expectant mothers would willingly avail themselves of such a facility.

Extension of post-natal clinics.—The work of the post-natal clinics has developed to such an extent during the past year that the question of the opening of additional clinics, or of holding extra sessions at the existing clinics, calls for early consideration.

Dental treatment.—Cases frequently arise where mothers or expectant mothers attending the clinics are found to be in a subnormal state of health which is directly traceable to extensive dental disease. It is to be hoped that during the coming year the Maternity and Child Welfare Committee will be able, through the co-operation of the Education Committee, to arrange for the treatment of selected cases at the dental clinic which is being established in Mount Grove.

Maternity hospital provision.—The question of maternity hospital provision has received the earnest consideration of the Maternity and Child Welfare Committee during the past year. It is fully realised that, owing to the increasing demand for accommodation of this nature, the existing accommodation at the Birkenhead Maternity Hospital, where so much valuable work has been, and is still being, carried out, has become inadequate in extent to cope with the needs of the borough. It is further realised that, sooner or later, some provision will require

to be made on municipal lines to meet local requirements. There is evidence to show that in Birkenhead there is a growing tendency for women to wish to be confined away from their homes, the accommodation in which is in a very large number of cases so restricted that a confinement cannot take place in them with any degree of safety, or (in some instances) of decency. There can be little doubt that with the provision of extended hospital facilities this desire would be greatly increased.

In a memorandum recently issued by the Ministry of Health it has been pointed out that while the infant mortality rate of the country has dropped fairly steadily for a number of years past "the maternal death rate due to childbirth is little lower now than it was 70 years ago; in 1917 it was 4.8 per 1,000." It is further pointed out that the mortality of childbirth might be taken as an index of the prevalence of stillbirths and of infant mortality in the first few weeks after birth; a high rate in the latter being associated with a high incidence of maternal deaths.

The main considerations to be gone into in connection with the provision of a maternity hospital which would meet all the needs of the borough are:—

- (a) The number of patients to be accommodated.
- (b) The general type of accommodation required.
- (c) The most suitable situation for the hospital.

(a) In a comprehensive maternity hospital scheme for Birkenhead accommodation might in the first instance be provided for 50 cases. With this provision, allowing an average stay in hospital of three weeks per case—and this should be regarded as a minimum—850 cases could be dealt with in a year; allowing an average stay of four weeks, the number of cases which could be dealt with annually would be 650.

The following table shows the number of births in Birkenhead during the decennium 1910-1919:—

Year.	No. of births.
1910	3,730
1911	3,732
1912	3,774
1913	3,907
1914	3,772
1915	3,844
1916	3,848
1917	3,261
1918	3,113
1919	3,385
Total	36,366

The average annual number of births for this period was therefore 3,637.

The provision of a 50-bed hospital would thus permit of the reception of 23 per cent. of Birkenhead cases on a three weeks basis and 18 per cent. on a four weeks basis.

(b) The type of accommodation required for a hospital of the size suggested would consist of:—

(1) Ward blocks.

(2) Separate administration buildings.

(1) The ward pavilions might with advantage be designed on the lines suggested in the Ministry of Health's memorandum and set out in the carefully prepared plans issued therewith. Two pavilions on this model, each containing accommodation for 25 patients, might be provided. Each pavilion would contain:—

A receiving room with bath and lavatory basins.

Two labour wards.

Lying-in accommodation provided in wards of 2 to 6 beds.

Isolation wards of 1 to 2 beds each to deal with cases suffering from venereal diseases, septicæmia, or other complications rendering them unsuitable for the general wards. Consideration should be given to the practicability of dealing with these cases in a separate ward block built on cubicle lines; this arrangement would be the more satisfactory one, but necessarily would involve greater initial cost.

Service room, store room, bathroom, lavatories, water closets, etc.

(2) Administrative accommodation should be provided in a building or buildings entirely separate from the ward blocks and should include quarters for resident medical, nursing and domestic staff, dispensary and laboratory, laundry accommodation, etc.

It is possible that an existing mansion might be found which could be utilised as the nucleus for this administrative accommodation, but accommodation for patients can very seldom be suitably provided in this way.

(c) In considering the most suitable situation for an institution of this kind full attention should be given to the desirability of placing the hospital in the healthiest possible environment, well away from noise and in a pure atmosphere not grossly polluted by town smoke. There is no doubt that the future will show more and more the placing of hospitals on the outskirts rather than in the centre of urban communities; with the growth and improvement of transit facilities it is very difficult to conceive of disadvantages which could be opposed to the very obvious advantages to be gained from the acceptance of this principle.

The site selected should be sufficiently extensive to allow of the spacing out of the ward blocks, etc., satisfactorily; to secure seclusion; to provide the necessary ground for kitchen gardens, recreation of patients and staff; and to give room for possible future extensions. For the size of hospital suggested above a site of at least 4 acres should be selected.

Staff.—In addition to the Medical Officer of Health as principal administrative medical officer, the medical staff engaged on maternity and child welfare work during the year consisted of Dr. Brewer, who has carried on the post-natal clinics; and Dr. Deacon, who has given one afternoon per week to the ante-natal clinic.

The arrangements for nursing staff engaged on home visiting and clinic work were reorganised during the year, on the lines detailed on page viii. In addition to the Chief Health Nurse and the Inspector of Midwives the equivalent of the whole time of six nurses was, at the end of the year, available for this work.

INSPECTION AND SUPERVISION OF MIDWIVES.

Work under this section is concerned with the administration of the Midwives' Acts, 1902 and 1918; the visiting of the homes of midwives, inspecting their instruments, etc., advising them on the details of their work and on their duties as set out in the above Acts, and in the rules issued by the Central Midwives' Board.

Number of midwives.—During the year 1920, 77 midwives entered their names on the local register as practising in the Borough. Of these, 9 subsequently left the district, and their names have been removed from the register accordingly. One midwife gave notice of change of address, and one had her name removed from the roll at her own request. No Birkenhead midwives died during the year.

Of the 77 midwives, 66 were trained and 11 untrained.

Number of cases attended by midwives.—The cases attended by midwives alone (no doctor being in attendance) numbered 3,073; approximately three-quarters of the total births in the Borough.

Visits of inspection.—The inspector of midwives paid 140 quarterly and 140 special visits of inspection.

Interviews in office.—20 midwives were interviewed during the year.

Complaints against midwives.—Complaints against midwives received numbered 11. These were investigated by the inspector.

Cases of puerperal fever in practice of midwives.—The inspector investigated six cases.

Cases requiring medical help.—483 cases were notified by midwives in which medical aid had been called in, as against 464 last year. The inspector made 202 special inquiries regarding cases requiring medical help.

HOME VISITING OF EXPECTANT MOTHERS, MOTHERS, AND YOUNG CHILDREN.

Home visiting.—The following is a summary of the visits paid by the health nurses in connection with expectant mothers, mothers, and young children:—

- 3628 routine first visits were paid to infants
- 8790 routine revisits were paid to infants under one year
- 5980 routine visits were paid to children over 1 year and under 5 years old.
- 45 first visits and 66 revisits were paid in connection with the investigation of stillbirths
- 135 visits were paid in connection with cases of measles
- 95 visits were paid in connection with cases of pneumonia

- 25 cases of ophthalmia neonatorum were visited and kept under supervision; recovery resulted, but in one case the right eye was subsequently removed
- 5 cases where death had occurred from diarrhœa were investigated
- 91 first visits were paid to expectant mothers
- 185 revisits were paid to expectant mothers
- 38 visits were made in connection with deaths of infants
- 17 special inquiries were made in connection with cases for admission to the Day Nursery

Cases reported for special action.—The following cases after being visited were reported for special action:—

- 79 cases of sanitary defects in houses were passed to the Chief Sanitary Inspector
- 6 cases were referred to the Charity Organisation Society
- 2 cases were reported to the Society for the Prevention of Cruelty to Children
- 10 cases were referred to the Invalid Children's Association
- 10 cases were referred to the Poor Law Relieving Officers

POST-NATAL CLINICS.

At the end of the year the clinics were being held as follows:—

Hamilton Square clinic: Monday and Wednesday afternoons, 2 to 5 p.m.

Brassey Street clinic: Thursday afternoon, 2 to 5 p.m.

St. Paul's Road clinic: Tuesday afternoon, 2 to 5 p.m.

The following table gives an indication of the work done at the clinics during the year:—

	Hamilton Square 93 sessions		Brassey Street 46 sessions		St. Paul's Road 49 sessions	
	1st visits	Revisits	1st visits	Revisits	1st visits	Revisits
Infants under 12 months	633	3477	403	2457	341	2561
Children 1—5 years	33	461	19	458	30	442
Children seen by Dr.	436	1545	279	964	242	958
Mothers seen by Dr. ..	86	104	70	57	45	34

Voluntary workers.—Much of the success of the post-natal clinics is due to the valuable services rendered by the voluntary helpers who throughout the past year have devoted themselves unsparingly to the work.

“ Babies' At Home.”—A most successful “ Babies' At Home ” was held at the Brassey Street clinic on February 11th for the babies and mothers attending all three post-natal clinics. Over 480 mothers with their babies attended.

Supply of milk.—Dried milk was sold at the clinics to suitable cases.

Supplies of milk were given free under the Milk (Mothers and Children) Order, 1919, to:—

- 15 Expectant mothers
- 100 Nursing mothers
- 64 Children

The income scale approved by the Maternity Committee, and in force at the end of the year, in connection with the provision of free milk was as follows:—Free milk was granted, unless exceptional circumstances were present, only where the combined income of household, less the amount paid in rent, did not exceed the total arrived at by allowing

In respect of the mother	15/-
„ father	15/-
„ each additional child (over 14 years)	10/-
„ first child in family	5/-
„ second child in family	4/6
„ each additional child	4/-

ANTE-NATAL CLINIC.

At the ante-natal clinic, which was opened in February, 115 women were seen during the year.

Condition with regard to pregnancy.—The condition of these cases with regard to pregnancy at the time of their first attendance was as follows:—

- (a) 19 were in their first pregnancy
- (b) 62 were in their second or subsequent pregnancy
- (c) 34 were not pregnant

115

Attendances.—The attendances made by these three classes of case were:—

- (a) 50
- (b) 207
- (c) 87

344

Abnormalities.—The abnormalities or diseases found to be present were as follows:—

- (a) Women who came to the clinic in their first pregnancy

Abnormality	No. of cases
Contracted pelvis	1
Tuberculosis... ..	1
Antepartum hæmorrhage	1
Sickness (abnormal)	1
Fits	1

(b) Women who came to the clinic in their second or subsequent pregnancy

Abnormality	No. of cases
Antepartum hæmorrhage	8
Albuminuria (marked)	7
Anæmia	7
Varicose veins	6
Venereal disease	3
Heart affections	2
Tuberculosis	1
Prolapsus uteri	1
Sickness (abnormal)	1
Retroversion	1
Breast abscess	1
Scabies	1
Hernia	1

(c) Women who were not pregnant when they first attended the clinic

Abnormality	No. of cases
Various uterine and ovarian defects requiring operation	12
(<i>e.g.</i> , retroversion, adherent cervix, ovaritis, etc.)	
Venereal disease	5
Anæmia	3
Mental symptoms	1
Breast abscess	1
Commencing white leg	1
Fibroids	1
Varicose veins	1
Hæmorrhoids	1
Glands in groin	1
Post-partum hæmorrhage	1
Paralysis after confinement	1
Retroversion	1

Progress of pregnancies.

(a) of the 19 women who came to the clinic in their first pregnancy

16 were confined before the end of the year, and had healthy babies (one of these women was tuberculous)

1 had twins, who both died

1 died of puerperal mania (this patient had a contracted pelvis; child survived and was healthy)

1 left the district and has not been traced.

(b) of the 62 women who came to the clinic in their second or subsequent pregnancy

42 were delivered of healthy babies

3 had twins (in one case the twins died)

6 were not delivered before the end of the year

11 had miscarriages or premature children.

Co-ordination with Borough Hospital.—Of the cases requiring operative treatment those which were considered suitable were referred to the Borough Hospital, whose staff have co-operated very readily with the work of the ante-natal clinic.

OTHER PROVISION MADE BY THE LOCAL AUTHORITY.

Cases dealt with at Borough Hospital.—During the year, under the Corporation's agreement, 16 cases were dealt with at the Borough Hospital; 10 women and 6 children.

Cases dealt with at Leasowe Hospital.—The three beds reserved by the Corporation at Leasowe Hospital were in occupation until August, when the annexe was closed owing to an outbreak of infectious disease.

Cases dealt with by the Birkenhead District Nursing Society.—During the year the society's nurses paid 3,404 visits to 204 cases, as per agreement between the society and the Corporation. In addition 1,062 visits were paid to 66 cases in children under 5 years of age not included in the agreement.

Cases of confinement attended by medical practitioners.—In two cases where doctors were called in to difficult cases of confinement the doctors' fees were paid by the Corporation under the provisions of the Midwives' Act, 1918.

The circumstances necessitating a doctor's attendance in both these cases were:—

Complications during labour.

In both cases, owing to the nature of the home circumstances, the whole of the medical fee was paid by the local authority.

AGENCIES ASSISTED BY THE LOCAL AUTHORITY.

The Corporation gives financial support to certain other institutions, etc., for general services rendered in connection with maternity and child welfare work.

Birkenhead Maternity Hospital.—Here 15 beds are provided for maternity cases, but no beds are specially set apart for patients sent from this department. Under the direction of the Hospital Committee a clinic for mothers and babies is held at Grange Mount, Birkenhead.

St. Paul's Eye Hospital, Liverpool.—Cases of ophthalmia neonatorum are treated at this hospital. During the year seven infants suffering from ophthalmia neonatorum were admitted to the hospital from this area.

Birkenhead Day Nursery.—Here accommodation is provided for 24 day children and 3 boarders.

Birkenhead and Wirral Invalid Children's Association.—Arrangements are made by this association to send children to convalescent homes, and to provide massage treatment for cases of infantile paralysis, etc.

Birkenhead and District Rescue Association.—This association provides 34 beds at St. Faith's Home for unmarried mothers and their children—20 beds for babies and 14 for mothers.

The grants made by the Corporation to the above agencies for the current financial year were as follows:—

Birkenhead Maternity Hospital.....	£200
St. Paul's Eye Hospital	30
Birkenhead Day Nursery	75
Birkenhead and Wirral Invalid Children's Association	30
Birkenhead and District Rescue Association	50
	<hr/>
	£385
	<hr/>

AGENCIES NOT PROVIDED OR ASSISTED BY THE LOCAL AUTHORITY.

Other agencies whose work in Birkenhead touches the welfare of mothers and infants, but which are not provided or assisted by the Birkenhead Corporation, are the following:—

- The Birkenhead Union.
- The Birkenhead and Wirral Children's Hospital.
- The Charity Organisation Society.
- The Society for the Prevention of Cruelty to Children.
- The Naval and Military War Pensions Committee.
- The Sisters of Charity (St. Elizabeth's) Welfare Centre, Cloughton Road, Birkenhead.
- The Gynæcological Clinic at the Borough Hospital (opened in April, 1920, with Dr. Dalzell as honorary gynæcologist).

HEALTH OF SCHOOL CHILDREN.

ADMINISTRATIVE ARRANGEMENTS.

The arrangements made by the Birkenhead Education Committee for promoting the health of the children attending elementary and secondary schools in the Borough include

(a) The medical inspection and re-inspection of children and young persons in elementary and secondary schools. Routine inspection in elementary schools now covers the examination of

“ Entrants ”—all admissions to infants’ schools and all children in such schools not previously examined.

“ Intermediates ”—children reaching the age of eight during the year.

“ Leavers ”—children in senior schools reaching the age of twelve during the year.

(b) The following up of cases found on inspection to require medical attention.

(c) The provision of medical treatment for certain children suffering from minor ailments.

(d) The examination of children with defective vision, the prescribing of spectacles, and the supply of spectacles.

(e) The provision of a special school for mentally defective children.

(f) The medical examination of children with reference to fitness for employment.

(g) The examination of children suspected of mental defect.

(h) The examination of children for whom exemption from school attendance is claimed.

(i) The examination of children awarded scholarships to secondary schools, bursars, and student teachers.

(k) The inspection of school premises as to lighting, ventilation, &c.

Staff.—Throughout the year Dr. Smythe and Dr. Deacon, Assistant Medical Officers, were engaged on the detailed work of inspection and treatment. Dr. Grimshaw, who, during 1918 and 1919 carried out voluntary work at the Eye Clinic, was appointed part-time oculist early in the past year, and took up duty in this capacity on 1st April, 1920.

The reorganisation of the work of the Nursing Staff, which provided for the equivalent of the whole time of five nurses being devoted to the school medical service, took effect early in the year. The new arrangement did not alter the total amount of nursing assistance available for the service, but brought about a linking-up between this and the other health services in the area.

Co-ordination with other health work.—The Board of Education request that a statement as to the co-ordination of the work of the School Medical Service with that of other health services in the area should appear in this annual report. In Birkenhead, as in the great

majority of other areas throughout the country, full co-ordination exists in so far as one principal Medical Officer is responsible for the organisation and administration of the health and medical services provided by the Education, Health, and Maternity and Child Welfare Committees.

It is recognised by these committees to be very desirable in the interests of economy and general efficiency that this linking-up should be as intimate as possible. Records of children who have been under supervision at Maternity and Child Welfare Clinics should be available in connection with school medical inspection in later life; detailed reports on mentally defective children should later be readily accessible for the purposes of the Mental Deficiency Committee's work; the control of infectious disease in schools should be in the same hands that deal with the medical inspection of school children; and in many other directions the need of unification is equally obvious.

Extension of the scope of medical inspection to secondary schools, etc.—Under section 18 of the Education Act, 1918, the scope of school medical inspection, treatment, and supervision was extended to secondary schools, continuation schools, etc.

An order made by the Board of Education fixed 1st April, 1920, as the date on which this section would be brought into full operation.

A thorough system of inspection was inaugurated at the Girls' Secondary School, Birkenhead, during the past year, and a report on the interesting results obtained is given on a subsequent page.

It is hoped that it will be possible in subsequent years to arrange for an annual complete medical inspection of all the children attending the Girls' Secondary School and the Birkenhead Institute (Boys) and of the older children attending the Higher Elementary School (Boys).

Medical examination of children regarding fitness for employment.

—Under the Employment of Children Act, 1903, and the Education Act, 1918, bye-laws were made by the Local Education Authority in March, 1920, for regulating the employment of children and young persons.

These bye-laws have an important relation to health. The following provisions may be instanced:—

Employment after school on school days. No child shall be employed on school days except between 5-30 and 7 p.m.

Sundays. No child shall be employed on Sundays except in the delivery of milk between the hours of 8 and 10 a.m., or in religious services.

Saturdays and school holidays. A child shall not be employed on Saturdays or on any week-day on which the school is not open for more than five hours, such employment to be between either (a) 8 a.m. and 1 p.m. and/or (b) 6 p.m. and 8 p.m.

Employment cards. No child shall be employed in any of the following occupations:—

- The sale or delivery of newspapers or milk;
- In carrying or delivering goods or parcels;
- In or in connection with any shop or stall or coal yard;
- In industrial work at home;

except subject to the following conditions:—

(a) No child shall be so employed unless within 30 days after these bye-laws come into operation, or after that date in the case of a child not so employed unless within 14 days from the date when the employment begins, the child has obtained from the School Medical Officer a certificate that such employment will not be prejudicial to his health or physical development, and will not render him unfit to obtain the proper benefit from his education, and the certificate has been produced to and endorsed by his employer.

The employer shall require the child (i) at the termination of each six months' employment, and (ii) upon resuming employment after suffering from any infectious disease, to produce a further certificate from the School Medical Officer and shall endorse such certificate.

No charge shall be made for such certificates.

(b) The employer shall send a written notification to the Local Education Authority stating his own name and address, and the name, address and date of birth of the child, and the place at which the child is employed, and the times at which such employment begins and ends. Such notice shall be sent within 30 days of the bye-laws coming into operation, or, in the case of a child not so employed until after that date, within 24 hours after the employment begins.

(c) The Local Education Authority shall issue to each child in respect of whom such notice is given a card called in these bye-laws an "Employment Card," and after such card is issued no such child shall be employed at any time unless he has such card with him. The child shall produce the card for inspection if and when required by any authorised officer of the Local Education Authority, or by the head teacher.

(d) The Local Education Authority shall cause to be entered on such card the name and address and date of birth of the child and the times between which the employment of such child is permitted. The times so entered shall be such as the employer may choose provided they are such as are allowed by Bye-laws 5, 6, and 7.

The times may be altered by the Authority from time to time on the application of the employer.

(e) No child to whom an Employment Card has been issued shall be employed except within the times entered by the Authority on the card.

(f) The employer shall keep affixed in a conspicuous position in the place in or in connection with which the child is employed a notice showing the name and address and date of birth of the child, and the occupation in which and the place at which and the hours between which each child is employed; and shall send to the Local Education Authority on the 1st May, 1920, and thereafter at intervals of every six months a list showing the same particulars in respect of each child then employed by him.

Street trading. No girl under 16 years of age, and no boy under 15 years of age, shall be employed or engage in street trading.

No person under 16 shall be employed or engage in street trading after 8 p.m.

No person under 16 shall be employed or engage in street trading on Sunday.

A licence to engage in street trading shall not be refused by the Local Education Authority to any person between the ages of 15 and 16 applying for it and not prohibited by Bye-law 10, except on the following grounds:—

- (a) That the applicant is by reason of physical or mental deficiency unfit to trade in the streets; or
- (b) That he is not regularly attending a continuation class as required by law; or
- (c) That he has not his parents' or guardians' consent to his being so engaged; or
- (d) That his licence has been previously revoked.

It will be seen that the carrying out of these bye-laws involves a considerable amount of new medical inspection. Arrangements have been made for the necessary examinations to be conducted at the clinics at stated hours, and the number of these examinations is given later in this report.

Extensions in administrative arrangements contemplated or suggested:—

1. *Dental clinic.*—Progress was made during the latter part of the year with the establishment of a Dental Clinic at the Education Committee's premises at Mount Grove. The premises were partly re-decorated and the necessary structural alterations were made. A scheme submitted by the Medical Officer for equipping the clinic with instruments, apparatus, &c., was approved by the committee.

Mr. P. Wilson Smith, L.D.S., was appointed whole-time dental surgeon for the purposes of the clinic, but had not taken up duty by the end of 1920.

2. *Cleansing station.*—The need for the provision of a cleansing station calls for emphasis. Much good is done in the schools by the health nurses, in co-operation with the teachers, in the direction of diminishing personal uncleanness and the presence of pediculosis among the children; but until facilities are provided for the compulsory cleansing of children whose parents are incorrigibly neglectful really effective work is, in many cases, impossible. Persistent neglect of this kind exposes children to a vast amount of suffering, and can only be regarded (no matter how much of it is laid at the door of ignorance) as cruelty.

3. *X-Ray treatment of ringworm.*—The only form of treatment for ringworm practised at the present time in connection with the School Medical Service is the local application of drugs. This is a very lengthy process, and often involves absence from school for protracted periods—many months perhaps, and even over a year in some cases.

The provision of X-ray treatment calls for consideration. This is much more rapid and effective in action, and much loss of grant would be avoided if it were available.

4. *Open-air school.*—I should like to take this opportunity of urging the desirability of the establishment of an open-air school for

delicate Birkenhead children. Experience has shown that open-air schools are of the greatest value in curing incipient constitutional diseases and in building up delicate and weakly children into healthy and disease-resisting members of the community.

Expenditure on institutions of this kind is, in the truest sense, an economy, viewing the case from a purely financial standpoint. There can be no doubt that much of the disability and sickness of youth and adult life is preventible; and that many of the patients who find their way into our sanatoria and poor law hospitals, levying heavy charges on the rates, would never have fallen from health into invalidity and chronic industrial incapacity if special care had been available for them during the critical years of childhood.

INSPECTION (ELEMENTARY SCHOOLS).

Number of elementary schools and school children.—The number of elementary schools in the borough is:

Council Schools	15	
Voluntary Schools	20	Total 35

The recognised accommodation of these schools on the 31st December, 1920, was:

Council Schools	12,238	
Voluntary Schools	13,200	Total 25,438

The average number of scholars on the rolls during the year was:

Council Schools	10,882	
Voluntary Schools	13,970	Total 24,852

The average attendance was:

Council Schools	9,511	
Voluntary Schools	11,795	Total 21,306

Children inspected.—The following elementary school children were medically inspected during the year:—

1. At Routine Inspections	8081
2. At Special Inspections in the ordinary schools	433
3. As prospective entrants to the Higher Elementary School, the Institute for Boys, and the Girls' Secondary School	309
4. As entrants to the Cloughton Road Special School for Mental Defectives	36
5. As candidates for bursarships and Student-Teacherships	25
6. Under the Employment of Children Bye-laws.....	397
Total	<u>9,281</u>

The numbers examined in each school are given in Table S 11.

Re-examination of defective children.—During the year 4,284 children who at a previous examination had been found to require medical care were re-examined by the Assistant Medical Officers.

Co-operation of parents.—Notice is sent to parents before routine inspections informing them of the time when the examination will take place. The nature of any defects found is carefully explained at the inspection, and the reasons for obtaining medical attention made as

clear as possible, so as to enlist the sympathy of the parents and secure their co-operation.

Parents attended at the examination of 4,243 (50.3 per cent.) of the 8,081 children dealt with at routine inspections; and 226 (73.1 per cent. of the 309 prospective entrants to secondary schools.

Vaccination.—In the ordinary inspections children were examined as to vaccination marks. Of the 8,081 children examined

1470 (18.2%) showed no marks.
2654 (32.3%) showed one mark.
968 (12.0%) showed two marks.
556 (6.9%) showed three marks.
2433 (30.1%) showed four or more marks.

Height and weight.—Particulars of the average height and weight of the children examined are set out in Table S 9.

Infectious diseases.—Enquiry was made at each inspection as to the infectious diseases from which the children had suffered in the past. The information elicited is summarised in Table S 10.

Defects found requiring treatment.—The number of children referred for treatment as the result of medical inspection was as follows:—

<i>Skin Conditions.</i>	Code Group.	Special Cases.
Pediculosis	716	66
Ringworm	16	9
Scabies	51	14
Impetigo	8	10
Other diseases	32	6
<i>Eye Defects.</i>		
Defective vision and squint (for further details see Table S 2)	729	192
External eye disease	56	32
<i>Ear Defects</i>		
Defective hearing	3	5
Ear disease	78	28
<i>Teeth Defects</i> (for further details see Table S 8)	1235	10
<i>Nose and Throat Defects.</i>		
Enlarged tonsils	394	—
Adenoids	9	—
Enlarged tonsils and adenoids	87	35
<i>Non-Pulmonary Tuberculosis.</i>		
Glands	6	4
<i>Other Defects or Diseases</i>	368	50

A full statement regarding the defects found setting out the number of defective children is given in Table S 6. In Table S 11 the defective children are classified according to the schools attended.

TREATMENT (ELEMENTARY SCHOOLS).

The following procedure is observed as a routine in connection with all cases found on medical inspection to require treatment or supervision, in addition to informing the parents of the nature of defects found and the need for securing treatment:—

1. All cases where defects have been found are "followed up," visits to the homes being paid by the Health Nurses, and the parents urged to secure treatment.

2. Re-examinations of cases of defect are made by the Assistant Medical Officers from time to time, both in the schools and at the clinics.

During the past year the Health Nurses paid 4,403 visits to the homes of defective children in connection with "following-up"—3,120 first visits and 1,283 re-visits; and 4,284 defective children were re-examined by the Assistant Medical Officers.

Treatment of children found, at medical inspections held during 1920, to be suffering from defects which required medical attention.—As has been stated above, 4,858 out of the 8,514 children examined at routine or special inspections in elementary schools during 1920 were found to be suffering from defects requiring medical attention; of this 4,858, 2,907 or 59.8 per cent. received treatment before the end of the year.

Details of the various types of ailment treated will be found in Table S 4.

Treatment carried out at Minor Ailments Clinic.—At this Clinic treatment is given for such defects as otorrhœa, external eye disease, impetigo, scabies, ringworm, etc.

Ringworm of the scalp received special attention, 99 cases being dealt with, all the cases making daily attendances in the early stages of the disease. Of these 74 were discharged cured, leaving 25 on the register at the end of the year.

The scheme for the treatment of cases of malnutrition, etc., was continued. Emulsion, malt extract, simple tonics, etc., were purchased from a wholesale chemist and sold to patients at cost price, sales books being kept and duly audited. The patients attended once a week for the medicines, and a record of weight and progress was kept in each case on a separate supervision card. Many of the parents have expressed gratitude for the opportunity thus afforded, and the results obtained have been most satisfactory. Cases treated included tuberculosis, rickets, malnutrition, anæmia, debility after influenza, bronchitis, and convalescence after infectious diseases, and many minor debilitating ailments. This work has been carried out in co-operation with the Tuberculosis Clinic in this department, the local War Pensions Committee, and the Birkenhead and Wirral Invalid Children's Association; many of our children have been passed on to this last Society, after treatment, for a stay in a convalescent home.

Treatment carried out at Eye Clinic.—During the first three months of the year Dr. Grimshaw continued to act in an honorary capacity at the Eye Clinic. From 1st April onwards Dr. Grimshaw's appointment as part-time oculist took effect. Below will be found a record of the work carried out at the Clinic during the entire year. Cases selected for examination by the Assistant Medical Officers were seen by Dr. Grimshaw, and glasses were prescribed for suitable cases. These were fitted at a later session; and an endeavour was made so far

as time would allow to provide for the re-inspection of cases after a few months to check the results of treatment.

During the year 575 cases were examined and 496 children provided with spectacles. These spectacles were supplied by the Committee at a cost of £121 12s. 0d., of which no less than £113 11s. 7d. has been recovered from the parents.

The following is a summary of the condition of the eyes for which spectacles were prescribed during the year:—

Total number of cases of Hypermetropia (Simple and Astigmatic)	470
Total number of cases of Myopia (Simple and Astigmatic)	132
Total number of cases of Mixed Astigmatism	44
Total number of cases of Isometropia (equal defect)	403
Total number of cases of Anisometropia (unequal defect)	243

Hypermetropia.

Both eyes	173
Right eye	40
Left eye	31

Simple Hypermetropic Astigmatism.

Both eyes	52
Right eye	17
Left eye	19

Compound Hypermetropic Astigmatism.

Both eyes	81
Right eye	23
Left eye	34

Myopia.

Both eyes	41
Right eye	10
Left eye	10

Simple Myopic Astigmatism.

Both eyes	14
Right eye	10
Left eye	8

Compound Myopic Astigmatism.

Both eyes	22
Right eye	10
Left eye	7

Mixed Astigmatism.

Both eyes	20
Right eye	11
Left eye	13

Obstructive Blindness.

Corneal ulcers	4
Leucoma	9
Nebulae	11
Old Iritis	1
Cataract: Cases which had been operated on	3
Cases requiring operation	3
Opacity of lens and capsule	1

Nerve Blindness.

Disseminated choroiditis	2
Retino-choroiditis	2
Staphyloma	1
Macula disease	3
Congenital defects:	
Coloboma of iris and choroid	1
Coloboma of (right eye) iris and choroid (left eye) iris and optic disc	1

The work of the Eye Clinic is now progressing steadily. Children who are to be examined attend the clinic at a morning session to have the eyes atropised. In the afternoon they return and Dr.

Grimshaw examines the eyes objectively in the dark room by retinoscopy, the optical error being worked out. This finding is next compared with the results of an objective examination made with trial lenses before test-types; a further retinoscopic examination being made if necessary. Spectacles are then prescribed and suitable instructions given to the parents or other responsible persons who attend with the children.

When the children attend later the spectacles which have been obtained are tried, the fit of the frames checked, and the lenses verified; and the vision with the glasses is recorded. The oculist submits the unatropised eyes—with the glasses now on the face—to a second test in the dark room; and notes any change of lens which may be subsequently required at a re-inspection, and also the reserve of accommodation retained by cases of hypermetropia.

By this procedure the possibility of any error in the prescription and supply of spectacles is eliminated.

Two of the Health Nurses help Dr. Grimshaw with the work of the clinic, and clerical assistance is also provided.

The Eye Clinic is held on two half-days per week. The question of extending the work so as to permit of more complete re-inspection and observation is one which calls for early consideration. At present no systematic re-inspection is possible; it is very desirable, however, that children who have been provided with spectacles should be re-examined at stated intervals so that optical changes may be noted without delay and the necessary corrections made. In another direction extension of the work is called for—the supervision and treatment of children suffering from squint. In this connection the following passage from Dr. Grimshaw's report may be quoted:—"Every squinter should be under continuous observation—say, once a month—in order to see that the treatment is carried out, and to maintain the interest of the parent by providing an opportunity for watching (1) the progress of the cure of the squint and (2) the recovery of sight in the squinting eye as the result of the eye-practice enjoined but frequently neglected. The idea is far too prevalent that the cure of squint depends either upon an operation or a pair of spectacles, and that the sight of the squinting eye is a negligible factor in the case. At present, in spite of instruction reiterated *ad nauseam*, the only treatment of hundreds of cases of squint is the prescription of a pair of spectacles; with the result that there must be a large residuum of squinting eyes which, through sheer neglect, are passing into a state of more or less irremediable blindness."

Treatment of uncleanliness.—Under the new arrangements made by the Committee during the year the part-time services of each of the Health Nurses, under the supervision of the Chief Health Nurse, are now available in connection with the investigation of the personal cleanliness of school children.

The average number of visits paid during 1920 by the nurses to each school was 24.

26 sessions were occupied with special talks to children in the schools on the subject of cleanliness.

The total number of examinations made of children by the nurses in the schools was 13,360.

The number of individual children found unclean was 4,363.

The attention of the parents was directed to the condition of these children, and a considerable improvement was, in the aggregate, obtained. 1,514 home visits were paid; 995 first visits and 519 re-visits.

INSPECTION AND TREATMENT (SECONDARY SCHOOLS).

Secondary schools and school children.—These schools, with the average number of children on the rolls, are as follows:—

The Birkenhead Institute (Boys)	445
The Girls' Secondary School	400

(At the Higher Elementary School there are on the rolls approximately 182 boys over the age of 14 whose medical inspection is called for on the same lines as that of the older children in secondary schools. These numbers are included in the total of 24,852 elementary school children given above.)

Work carried out during 1920.—The past year saw the commencement of the work of medical inspection in secondary schools, the total number of children inspected being 497. A very careful series of inspections were made at the Girls' Secondary School; and an investigation carried out with a view to ascertaining what results could be obtained by co-ordinated effort in such an institution.

The details of this investigation are set out below; in order to demonstrate the practical results obtained emphasis is laid on the total number of defects found at a series of complete inspections.

It was arranged that the school should be visited by Dr. Deacon, Assistant Medical Officer, in January, May, September, and again at the end of the year; and that, at each of these visits, every child in the school should be examined.

A. *The primary inspection in January* was very complete in nature, 'particulars regarding each child being fully charted. The subsequent inspections occupied much less time, although no necessary detail of examination was omitted. (At the September inspection a number of newly-admitted children were examined in addition to those seen at the previous inspections.)

The record of the January inspection was as follows:—400 children were examined, 330 parents being present. 298 of these children were found to have defects requiring attention; the number of defects being 424. These defects were as follows:—

Seriously defective teeth	176 or 44%
This was a very marked defect; in many cases there was evidence of great neglect.	
Pediculosis	56 or 14%
The heads of some of the children were in a very bad condition.	
Deformities	52 or 13%
These included curvatures, round shoulders, bow legs, flatfoot, knock knees, and contractions from fractures.	
One hip joint deformity (congenital).	
Eye defects	48 or 12%
Chiefly cases of defective vision; a few cases of blepharitis and squint.	

Nose and throat defects	42 or 10.5%
Mainly cases of enlarged tonsils and adenoids.	
Ear defects	4 or 1%
3 otorrhœa and 1 post-operation mastoid case.	
Heart and circulation defects	22 or 5.5%
12 of these cases were anæmic in origin.	
Skin defects	8 or 2%
Other defects	16 or 4%
Ruptures 4, symptoms of appendicitis 5, enlarged thyroid 5, neuritis in arm 1, infantile paralysis 1.	

Instructions were given to the parents as to the need for attending to the conditions noted, and where medical defects existed for consulting the family doctor; arrangements were made for suitable gymnastic and curative exercises for girls with minor deformities; and the children with heart and circulation defects were put under careful observation.

In the interval between this inspection and the second held in May, Miss Edwards, the head mistress of the school, who has throughout the year been keenly interested in the investigation, saw many of the parents and pressed home the advice given by the medical inspector.

B. *At the re-inspection held in May* it was found that the total number of defective children in the school had dropped from 298 to 110, and the defects from 424 to 142.

C. *Leavers, and new entrants.*—The great majority of the children leaving the school in the course of a year do so before the summer holidays; while the bulk of the admissions take place after these holidays, in September.

During June and July a batch of elementary school children, 97 in number were medically examined as prospective entrants. Of these 85 were found to have defects, the latter numbering as follows:—

Pediculosis	50
Skin troubles	1
Eye defects	9
Nose and throat (tonsils)	1
Bad teeth	38
Heart and anæmia	3
Round shoulders, etc	14
<hr/>	
116	

The attention of the parents was called to these defects, and an endeavour made to secure their removal or treatment; and the children were admitted to school in August, at the commencement of the new term.

D. *In September the third re-inspection* of the whole school was made. It was now found that the number of defective children had dropped to 86 and the defects to 94, notwithstanding the admission of the 97 new children referred to in the preceding paragraph. a considerable number of whom had not had their defects remedied before entering the school.

E. *The school was finally re-inspected at the end of the year.* The defective children now numbered 57, and the defects 57. The results of the year's work will be readily seen, step by step, from Table S 14. The outstanding fact is that whereas this school started

the year with 74.5 per cent. of its children defective it finished with 14.5 per cent. In other words, the defect-index of the school had been cut down by four-fifths.

PERCENTAGE OF DEFECTIVE CHILDREN.

January, 1920	74.5
May, 1920	27.5
September, 1920	21.5
December, 1920	14.5

The deduction which can be made from this investigation is that, given

- (a) Intensive medical inspection—a thorough preliminary inspection followed by rapid but *complete* and *frequent* re-inspections.
- (b) Persistent following-up (home visiting by health nurses or, as in this case, the interviewing of parents by a keen head teacher)

a valuable reduction in the total amount of disability may be confidently looked for.

Let it be stated at once that in a secondary school such as that under consideration a higher standard is much more easily reached than in an elementary school in a poor district, for two reasons—(a) the parents are, on the average, better off, and (b) they take a more intelligent interest in the welfare of their children.

In other words, a given amount of effort will produce a greater result in a better class school than in a poor class school. It might be urged that so long as a limited amount of effort is available for such intensive medical inspection, it is more economical to concentrate experimental work of this kind on the better class schools.

Really good results will not be obtained from medical inspection as a whole until it is practicable to examine every school child at least once a year and to re-inspect at least once all children found defective. It is possible to move in the direction of this goal (a) by increasing the medical staff available; alternatively, (b) by adopting a less exacting standard for routine medical inspection or (c) by carrying out the work not on school premises but at properly equipped clinics where a far larger number of cases could be handled efficiently in a given time.

NOTE 1.—The children who were in attendance at the Secondary School throughout the *whole year* numbered 312. In these there were found at the first examination 337 defects; at the fourth examination 39 defects.

The defects were as follows:—

	At 1st Examination.	At 4th Examination.
Teeth defects	167	26
Pediculosis	53	—
Eye defects	47	2
Heart and circulation defects	13	6
Deformities untreated	29	1
Nose and throat defects	22	4
Appendix	3	—
Hernia	2	—
Nervous defects	1	—
	337	39

NOTE 2.—A complete systematic inspection of all the boys attending the Birkenhead Institute was not attempted during 1920. All *admissions* were medically examined, however, as has been the practice in previous years. In 1921 a complete examination of all the children attending this school will be carried out.

MISCELLANEOUS.

Examination of entrants to the Girls' Secondary School, the Birkenhead Institute and the Higher Elementary School.—During the year 309 elementary school children were examined with a view to their admission to the above schools. 161 were found to require treatment for 197 defects, the latter being as follows:—

Defective teeth	103
Eye defects	20
Nose and throat defects	3
Skin conditions	52
Ear defects	1
Other defects	18
	<hr/>
	197

The Special School for Mentally Defective Children.—The accommodation at the Special School for the year 1920 was 130. The average number on the rolls during the year was 109, and the average daily attendance 90.8.

Compared with last year there are 15 children less on the rolls, and the average attendance shows a decrease of 3.4.

Ten visits were paid to the school during the year by the Assistant Medical Officer. At these visits examinations were held of children suspected to be mentally deficient, with reference to their suitability for admission to the Special School. The results were as follows:—

Total number examined—Boys	25	
Girls	11	
	—	36
Number certified for admission—Boys	17	
Girls	7	
	—	24
Number not certified for admission—		
(a) Regarded as fit for ordinary school—Boys...	7	
Girls	3	
	—	10
(b) Notified to the Local Authority under the		
Mental Deficiency Act—Boys	—	
Girls	1	
	—	1
(c) Recommended for admission to Residential		
Special School—Boy	1	
	—	1

As it is not possible to admit all the children nominated for the Special School, a careful selection is made from those presenting themselves for examination. Those children who are found capable of profiting from the ordinary instruction of their own school are not admitted, and on the other hand it would be useless to admit ineducable children.

During the year two children attending the Special School died, two were removed from the district, and four left on reaching the age of sixteen.

In addition, 33 children were permitted to leave the school after medical examination, as follows:—

Fit for work	25
Ineducable and notified under the Mental Deficiency Act	1
Physically unfit to continue in attendance	2
Sent to Institutions	4
Found fit for ordinary school	1
Total	33

Of the 25 cases who left to take up work—

3 are employed in shipyards;
8 „ „ as errand boys;
5 are usefully employed at home;
5 are employed as domestic servants;
2 „ „ in slaughter-houses;
1 is „ as a shoe repairer;
1 „ „ newsboy.

The average age of the children attending the school, and their classification, are shown below:—

CLASS.	BOYS AVERAGE AGE.	GIRLS AVERAGE AGE.
Class 1—Boys.....	13	—
Class 2—Girls.....	—	12½
Class 3—Boys.....	12	—
Class 4—Boys and Girls	11	11½
Class 5—Boys and Girls	9	9
Class 6—Boys and Girls	10	10

School dinners have been provided throughout the year at a cost to the parent of 3d. per day.

Daily average supplied	60
Total cost for the year	£160 4s.

The weekly menu was:—

<i>Monday</i>	Scotch broth ; boiled currant pudding.
<i>Tuesday</i>	Irish stew ; tapioca pudding.
<i>Wednesday</i> ...	Minced meat, potatoes, greens ; rice pudding.
<i>Thursday</i> ...	Irish stew ; boiled syrup pudding.
<i>Friday</i>	Hot pot.

After-care of children who have left the Special School.—Mentally defective children pass automatically out of the care of the Education Committee when they reach the age of sixteen.

It is just at this age, however, that supervision or guidance is urgently required for these cases ; too often when the restraint of school discipline is removed the inherent lack of mental and moral self-control manifests itself, and the result of many years of devoted work spent on the children by the teachers in the Special School is undone.

With a view to initiating a system of after-care a card index register was, during the past year, prepared with the assistance of Miss Barker, the head teacher of the school, of all the children (363 in number) who have left the school since it was opened in September, 1903.

A start was also made with visiting the homes of these cases, and it is hoped that during the coming year room will be found for a system of visiting and regular re-visiting as an integral part of the work of the health nurses.

Physical training: School baths.—No organiser of physical training in school has as yet been appointed in Birkenhead and no schools have been furnished with school baths. (Information on these points is asked for by the Board of Education.)

Provision of meals.—Meals were not provided during the year.

Birkenhead and Wirral Invalid Children's Association.—During the year cases of deformity, paralysis, etc., were from time to time referred to this Association, and invariably the fullest assistance was given—massage and other suitable treatment being provided.

TABLE S 1.

Number of Public Elementary School Children Inspected 1st January, 1920, to 31st December, 1920.

A.—ROUTINE MEDICAL INSPECTION.*

Age	ENTRANTS					
	3	4	5	6	Other Ages	Total
Boys	13	294	959	152	47	1465
Girls	10	259	880	192	53	1394
Totals	23	553	1839	344	100	2859

Age	INTERME- DIATE GROUP	LEAVERS				Other Ages	Total	Grand Total
		8	12	13	14			
Boys	1238	1329	97	3	—	—	1429	4132
Girls	1197	1282	74	1	1	—	1358	3949
Totals	2435	2611	171	4	1	—	2787	8081

B.—SPECIAL INSPECTIONS.

	Special Cases †	Re-Examinations (i.e., No. of Children re-examined)
Boys	796	1877
Girls	404	2407
Totals	1200	4284

C.—TOTAL NUMBER OF INDIVIDUAL CHILDREN INSPECTED WHETHER AS ROUTINE OR SPECIAL CASES (no Child being counted more than once in the year).

No. of Individual Children Inspected 9281

*Routine Medical Inspection is medical inspection carried out on the lines of the approved Schedule at the time when routine medical inspection is due and made on the school premises or other place sanctioned by the Board of Education under the Code.

†“Special Cases” are those children specifically referred for medical examination and not due for routine medical inspection under the Code at the time when specially referred. Such children may or may not be of Code-group age and may be referred to the Assistant Medical Officers at the school or the clinic by the Medical Officer, Health Nurses, Teachers, Attendance Officers, Parents or otherwise.

TABLE S 2.

Return of Defects found in the course of Medical Inspection and referred for treatment in 1920.

This table is, except as regards the final line, a record of defects and not of individual children who are defective. For the sake of convenience cases of Squint are recorded also under the heading of "Defective Vision," and cases of defect of Nose and Throat are included in one only of the sub-headings.

Defects or Disease	ROUTINE INSPECTIONS	* SPECIALS
	No. referred for treatment	No. referred for treatment
<i>Malnutrition</i>	3	1
<i>Uncleanliness</i> ..Head	716	66
Body		
<i>Skin</i> .....Ringworm—Head	16	9
Body		
Scabies	51	14
Impetigo.....	8	10
Other diseases (non-tubercular)	32	6
<i>Eye</i> .....Blepharitis	—	—
Conjunctivitis	54	30
Keratitis	—	—
Corneal ulcer	—	—
Corneal opacities	—	—
Defective vision.....	729	192
Squint.....	100	24
Other conditions	2	2
<i>Ear</i> .....Defective hearing	3	5
Otitis media	—	—
Other ear diseases	78	28
<i>Nose and throat</i> . Enlarged tonsils	394	—
Adenoids.....	9	—
Enlarged tonsils and adenoids.....	87	35
Other conditions	—	—
<i>Enlarged cervical glands (non-tubercular)</i>	6	4
<i>Defective speech</i>	—	—
<i>Teeth</i> .....Dental diseases	1235	10
<i>Heart and circulation</i> —		
Heart disease—Organic	—	—
Functional	17	1
Anæmia	—	7
<i>Lungs</i> .....Bronchitis	—	—
Other non-tubercular diseases.....	127	9
<i>Tuberculosis</i> ...Pulmonary—Definite	—	—
Suspected.....	—	—
Non-pulmonary—Glands	10	2
Spine		
Hip		
Other bones and joints		
Skin		
Other forms.....		
<i>Nervous system</i> ..Epilepsy	—	2
Chorea.....	7	1
Other conditions	—	—
<i>Deformities</i> .....Rickets	—	—
Spinal Curvature	—	—
Other forms	—	—
<i>Other defects and diseases</i>	207	28

Number of individual children having defects which required treatment. 3493

NOTE.—No cases were classified as "Requiring to be kept under observation, but not referred for treatment."

*See footnote † in Table I.

TABLE S 3.

Numerical Return of all Exceptional Children in the Area in 1920.

			Boys	Girls	Total
<i>Blind</i> (including partially blind) within the meaning of the Elementary Education (Blind and Deaf Children) Act, 1893		Attending public elementary schools ...	—	—	—
		Attending certified schools for the blind	2	5	7
		Not at school.....	—	—	—
<i>Deaf and dumb</i> (including partially deaf) within the meaning of the Elementary Education (Blind and Deaf Children) Act, 1893		Attending public elementary schools...	—	—	—
		Attending certified schools for the deaf	7	3	10
		Not at school.....	—	—	—
<i>Mentally deficient</i>	Feeble minded	Attending public elementary schools...	—	—	—
		Attending certified schools for mentally defective children	79	39	118
		Notified to the Local Control Authority by Local Education Authority during the year	1	2	3
		Not at school.....	—	—	—
	Imbeciles	At school.	—	—	—
		Not at school.....	1	—	1
	Idiots	.....	2	1	3
<i>Epileptics</i>		Attending public elementary schools .	—	—	—
		Attending certified school for epileptics	—	1	1
		In institutions other than certified schools.....	—	—	—
		Not at school.....	1	1	2
<i>Physically defective</i>	Pulmonary tuberculosis	Attending public elementary schools...	51	42	93
		Attending certified schools for physically defective children.....	—	—	—
		In institutions other than certified schools.....	2	4	6
		Not at school.....	7	12	19
	Crippling due to tuberculosis	Attending public elementary schools...	85	69	154
		Attending certified schools for physically defective children.....	—	—	—
		In institutions other than certified schools.....	17	11	28
		Not at school.....	9	8	17
	† Crippling due to causes other than tuberculosis, <i>i.e.</i> , paralysis, rickets, traumatism	Attending public elementary schools...	—	—	—
		Attending certified schools for physically defective children.....	—	—	—
		In institutions other than certified schools....	—	—	—
		Not at school.....	—	—	—
	† Other physical defects, <i>e.g.</i> , delicate & other children suitable for admission to open-air schools; children suffering from severe heart disease	Attending public elementary schools ..	—	—	—
		Attending open-air schools	—	—	—
		Attending certified schools for physically defective children other than open-air schools.....	—	—	—
		Not at school.....	—	—	—
* † Dull or backward		Retarded 2 years	—	—	—
		Retarded 3 years	—	—	—

* Judged according to age and standard. No case retarded more than 3 years is included in this category unless it has been decided after medical examination that the child is not mentally defective.

† No detailed list has yet been prepared.

TABLE S 4 .

Treatment of Defects of Children during 1920.

A.—TREATMENT OF MINOR AILMENTS.

Disease or defect	Number of children			
	Referred for treatment	Treated		
		Under Local Education Authority's scheme	Otherwise	Total
<i>Skin</i> —Ringworm—head	71	52	—	52
body	28	22	—	22
Scabies	145	80	45	125
Impetigo	118	100	—	100
Minor injuries	—	—	—	—
Other skin diseases	94	28	56	84
<i>Ear disease</i>	202	88	45	133
<i>Eye disease</i> (external and other)...	166	78	21	99
<i>Miscellaneous</i>	845	154	—	154

B.—TREATMENT OF VISUAL DEFECT.

Number of children									
Referred for refraction	Submitted to refraction				For whom glasses were prescribed	For whom glasses were provided	Recommended for treatment other than by glasses	Received other forms of treatment	For whom no treatment was considered necessary
	Under Local Education Authority's scheme—Clinic or hospital	By private practitioner or hospital	Otherwise	Total					
921	546	309		855	828	778	5	1	22

C.—TREATMENT OF DEFECTS OF NOSE AND THROAT.

Referred for treatment	Number of children			
	Received operative treatment			Received other forms of treatment
	Under Local Education Authority's scheme—Clinic or hospital	By private practitioner or hospital	Total	
528	—	389	389	—

D.—TREATMENT OF DENTAL DEFECTS.

The Local Education Authority's scheme for the treatment of defects at a Dental Clinic was not in operation before 31st December, 1920.

E.—TREATMENT OF UNCLEANLINESS.

Average number of visits made during the year by the Health Nurses to each school	24
Total number of examinations made of children by Health Nurses in the year in the schools	13360
Number of individual children found unclean	4363
Number of children compulsorily cleansed	—
Legal proceedings taken under the Children Act, 1908, or the School Attendance Bye-laws	—

F.—TREATMENT OF ALL OTHER DEFECTS.

Number of cases referred for treatment	495
Number of cases treated up to 31st December, 1920	154

TABLE S 5.

Summary of Treatment of Defects as shown in Table S 4.

Disease or defect	Number of children			
	Referred for treatment	Treated		
		Under Local Education Authority's scheme	Otherwise	Total
Minor ailments	1669	602	167	769
Visual defects	921	546	309	855
Defects of nose and throat	528	—	389	389
Dental defects	1245	—	740	740
Other defects	495	—	154	154
Total	4858	1148	1759	2907

TABLE S 6.

Summary relating to Public Elementary School Children Medically Inspected at the Routine Inspections during the year 1920.

(1) The total number of children medically inspected at the routine inspections*	8081
(2) The number of children in (1) suffering from—	
Malnutrition	396
Skin disease	142
Defective vision (including squint)	729
Eye disease	294
Defective hearing	84
Ear disease	215
Nose and throat disease	1312
Enlarged cervical glands (non-tubercular)	348
Defective speech	131
Dental disease	1267
†Heart disease—Organic	85
Functional	118
Anæmia	90
Lung disease (non-tubercular)	344
Tuberculosis—Pulmonary definite	5
suspected	—
Non-pulmonary	7
Disease of the nervous system	66
Deformities	155
Other defects and diseases	259
(3) The number of children in (1) suffering from defects (other than uncleanliness or defective clothing or footgear) who require to be kept under observation (but not referred for treatment) ...	—
(4) The number of children in (1) who were referred for treatment (excluding uncleanliness, defective clothing, &c.)	2344
(5) The number of children in (4) who received treatment for one or more defects (excluding uncleanliness, defective clothing, &c.)	1540

*“Specials” are not included in this Table.

†The majority of these cases were for observation purposes.

TABLE S 7.

Vision amongst Routine Cases (Elementary Schools) examined during 1920.

BOYS AND GIRLS.

	NORMAL					WORSE THAN
	6	6	6	6	6	6
Vision	—	—	—	—	—	—
	6	9	12	18	24	24
Right eye	3967	544	227	218	97	169
Left eye	3854	593	253	218	125	179

Number with both eyes defective	969
Children examined	5222
Percentage with defective sight	31.3

Note.—Entrants were not inspected in regard to vision.

TABLE S 8.

Number of Decayed Teeth amongst Elementary School Children examined by the Assistant Medical Officers during the year 1920.

	No. examined	0	1 to 4	5 to 8	9 or more	Total No. of children with defec- tive teeth	Percentage of children with defec- tive teeth
Entrants—Boys	1465	776	522	129	38	689	47.0
„ Girls	1394	705	539	128	22	689	49.4
Intermediates—Boys.	1238	360	648	186	44	878	70.9
„ Girls.	1197	353	609	183	52	844	70.5
Leavers—Boys.....	1429	578	777	66	8	851	59.6
„ Girls	1358	528	766	54	10	830	61.1
Totals	8081	3300	3861	746	174	4781	59.2

TABLE S 9.

Heights and Weights of Elementary School Children.

	No. examined	Average height			Average weight		
		Ft.	In.	$\frac{1}{16}$ in.	Stones	Lbs	Ozs
Boys ...Age 4 years.....	294	3	3	7	2	9	5
Age 5 years	959	3	4	14	2	11	4
Age 7—8 years	1238	3	10	1	3	7	0
Age 12 years	1329	4	5	13	4	13	13
Age 13 years	97	4	7	9	5	6	10
Girls ...Age 4 years	259	3	3	0	2	8	4
Age 5 years.....	880	3	4	10	2	10	0
Age 7—8 years	1197	3	9	11	3	5	7
Age 12 years	1282	4	5	15	4	13	4
Age 13 years	74	4	8	6	5	9	10

TABLE S 10.

Past Infectious Diseases (Elementary School Children).

(1) Children aged 3—7 (2,833).		No. of Cases.	Percentage.
No Infectious Disease		630	22.2
Measles		1901	67.1
Whooping Cough		1274	45.0
Scarlet Fever		127	4.5
Diphtheria		47	1.7
Chicken Pox		655	23.1
Mumps		391	13.8
(2) Children aged 8—15 (5,248).		No. of Cases.	Percentage.
No Infectious Disease		399	7.6
Measles		4650	88.6
Whooping Cough		3106	39.1
Scarlet Fever		575	11.0
Diphtheria		141	2.7
Chicken Pox		2173	41.4
Mumps		1229	23.4

Note.—The same child may have had more than one of these diseases.

TABLE S 11.

Showing the number of children examined at the Routine Inspections in the Schools and the number found defective in each School.

SCHOOL	Entrants	Intermediates	Leavers	Total ordinary inspections	Parents present	*Number of defective children	CLASSIFICATION OF DEFECTS										Number of defects found							
							Defective teeth	Tonsils and adenoids	Defective hearing and otorrhoea	Defective sight	Conjunctivitis and blepharitis	Chest affections	Heart affections	Skin diseases, ringworm, scabies, impetigo	Rickets, anaemia, malnutrition, delicate	Other defects								
Brassey Street	114	109	122	345	197	118	162	49	50	6	23	1	10	4	7	5	7	7	5	7	4	7	5	7
Cathcart Street	69	110	141	320	171	83	122	36	32	6	32	3	9	2	—	2	—	32	3	9	2	2	—	2
Hemingford Street	143	84	83	310	214	120	195	45	55	10	22	4	26	4	8	7	14	10	22	4	26	4	8	7
Laird Street	114	104	116	334	226	100	173	42	63	11	27	1	14	3	4	1	7	11	27	1	14	3	4	1
Mersey Park	87	76	112	275	141	113	183	85	32	5	32	3	7	5	3	6	5	32	3	7	5	3	6	5
Rock Ferry	146	117	135	398	152	148	284	67	69	14	52	3	17	25	16	10	11	14	52	3	17	25	16	10
Temple Road	66	48	53	167	86	45	80	35	17	3	8	1	2	7	2	4	1	3	8	1	2	7	2	4
The Woodlands	127	113	113	353	198	122	165	30	46	10	23	2	10	7	12	9	16	10	23	2	10	7	12	9
Well Lane.....	58	79	122	259	126	77	157	43	54	2	27	1	7	14	2	2	5	54	27	1	7	14	2	2
Woodchurch Road	127	104	125	356	219	124	185	81	39	7	28	1	6	12	4	6	1	39	28	1	6	12	4	6
Park Road Temporary ...	97	54	—	151	109	46	71	24	20	3	5	2	5	2	2	4	4	20	5	2	5	2	2	4
Cleveland Street , , ...	132	41	—	173	96	73	91	12	22	12	14	2	12	—	9	2	6	22	14	2	12	—	9	2
Price Street , , ...	—	12	43	55	22	26	37	9	7	2	4	2	2	—	—	—	11	7	4	2	2	—	—	—
Claughton H.C.	121	85	120	326	222	114	184	61	45	7	28	—	8	20	3	5	7	45	28	—	8	20	3	5
						13	53	5	7	1	2	—	2	—	1	2	3	7	2	—	2	—	1	2

Our Lady's	117	101	117	335	148	154	193	37	52	10	53	4	19	2	6	5	5	22
Oxton	31	14	44	89	41	31	50	19	13	—	10	1	—	4	1	1	1	
Rock Ferry H.G.	68	82	100	250	114	94	148	73	25	4	21	1	2	12	1	7	2	
St. Andrews, Conway St.	32	26	31	89	59	44	60	26	17	4	5	—	3	—	2	2	1	
St. Anne's.....	78	81	99	258	122	104	122	15	36	7	34	1	10	2	4	5	8	
St. Anne's R.C.	67	63	89	219	90	103	158	60	35	9	27	1	3	10	2	3	8	
St. Catherine's.....	66	65	50	181	76	59	93	37	21	3	16	—	5	4	4	3	—	
St. James'	50	61	63	174	81	53	81	20	29	7	12	3	2	3	1	4	—	
St. John's	134	79	120	333	184	106	168	26	57	5	21	1	28	4	7	7	12	
St. Joseph's	39	19	19	77	28	23	35	12	3	1	5	—	4	1	2	—	7	
St. Laurence's	158	142	187	487	286	225	288	44	82	14	73	8	40	4	3	8	12	
St. Luke's	73	99	103	275	147	98	180	56	37	4	25	2	15	18	6	11	6	
St. Mary's	80	62	96	238	85	113	152	47	27	9	34	1	10	10	5	4	5	
St. Paul's	74	68	61	203	90	97	139	32	36	11	28	2	9	12	2	2	5	
St. Peter's.....	119	99	100	318	142	132	196	28	57	14	38	3	24	7	7	5	13	
St. Werburgh's	122	101	78	301	110	151	197	54	53	9	29	4	21	7	7	5	8	
Tranmere H.G.	31	47	60	138	87	57	89	42	17	—	11	—	3	5	1	6	4	
Combined Totals...	2859	2435	2787	8081	4243	3060	4591	1267	1184	215	792	66	349	213	142	146	217	

* The number of defects found is in excess of the number of defective children, as one child may have several defects.

TABLE S 12.
Cases treated at the Minor Ailments Clinic.

	Jan. 1 to March 31	April 1 to June 30	July 1 to Sept. 30	Oct. 1 to Dec. 31	Total
Total number of children who attended the clinic	1577	1530	813	668	4588
Total number of children treated	955	1164	663	427	3209
Total number of attendances	4106	3881	1940	1749	11676
Total number cured	622	366	119	33	1140
New cases	969	798	429	302	2498

Showing the Defects Dealt with at the Minor Ailments Clinic Month by Month.

Health of school children.

Month	NUMBER OF ATTENDANCES FOR TREATMENT										RESULTS			No. of new cases	
	Ringworm	Verruinous condition	Dirty head	Impetigo	Scabies	Malnutrition tuberculous and delicate	Eyes	Ears	Other defects	Total No. of attendances	No. of attendances for treatment only	Attendances for inspection	No. improved and fit for school		No. cured
January...	92	—	197	141	86	17	112	171	472	1288	789	499	32	213	348
February.	99	1	48	115	127	10	123	260	454	1237	724	513	27	179	302
March ...	128	10	35	154	127	17	184	359	567	1581	1012	569	38	230	319
April	136	1	171	65	74	52	82	235	336	1152	820	332	26	109	243
May	180	6	136	172	105	81	206	155	451	1492	884	608	65	118	304
June	94	3	46	140	89	78	150	177	460	1237	752	485	28	139	251
July	40	—	5	29	8	12	18	64	94	270	182	88	4	21	39
August ...	119	—	17	50	13	34	71	106	173	583	331	252	3	74	122
September	194	14	35	83	41	105	111	285	219	1087	750	337	31	24	268
October ..	132	—	5	15	—	18	117	153	142	582	559	23	2	20	125
November	211	—	1	57	2	2	89	196	151	709	692	17	1	9	103
December.	119	—	3	26	—	—	69	159	82	458	458	—	—	4	74
Totals.	1544	35	699	1047	672	426	1332	2320	3601	11676	7953	3723	257	1140	2498

TABLE S 14.

Defects noted in Inspection and Re-inspection of Children at the Girls' Secondary School, 1920.

Defects requiring treatment	First inspection January, 1920 No.	Re-inspection May 1920 No.	Re-inspection September 1920 No.	Re-inspection December 1920 No.
Defective teeth	176	80	58	38
Pediculosis	56	10	4	3
Deformities.....	52	All receiving suitable		treatment
Eye defects.....	48	12	6	6
Nose and throat defects	42	16	12	6
Ear defects.....	4	2	—	—
Heart and circulation defects	22	10	10	4
Other defects	16	8	4	—
Skin defects	8	4	—	—
Total.....	424	142	94	57